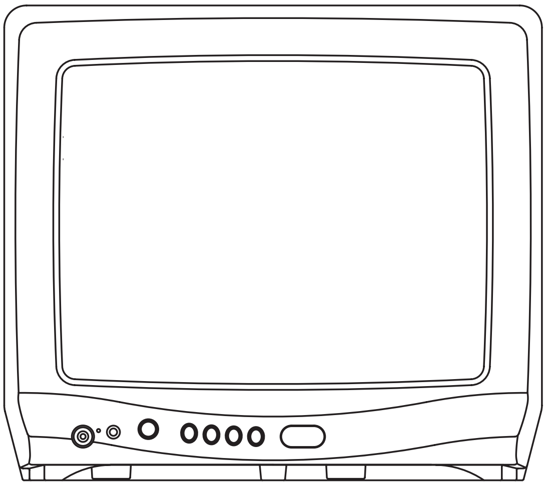
Pacific

PTV3606

SERVICE MANUAL

COLOR TELEVISION RECEIVER



ORIGINAL
MFR'S VERSION A

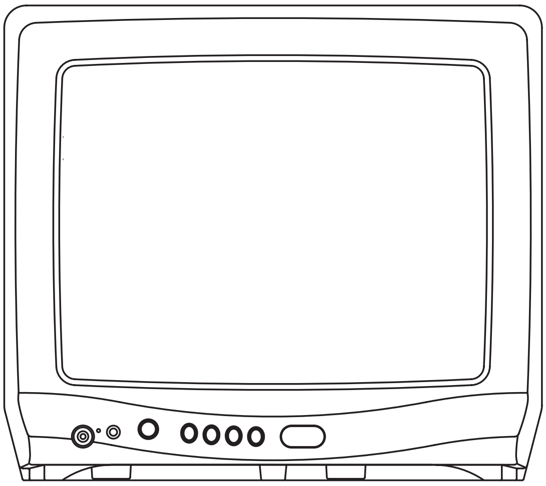
Design and specifications are subject to change without notice.

Pacific

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ORIGINAL
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Design and specifications are subject to change without notice.

SERVICING NOTICES ON CHECKING

1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.
Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a ⚠ mark, the designated parts must be used.

4. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

5. TAKE CARE TO DEAL WITH THE CATHODE-RAY TUBE

In the condition that an explosion-proof cathode-ray tube is set in this equipment, safety is secured against implosion. However, when removing it or serving from backward, it is dangerous to give a shock. Take enough care to deal with it.

6. AVOID AN X-RAY

Safety is secured against an X-ray by considering about the cathode-ray tube and the high voltage peripheral circuit, etc.
Therefore, when repairing the high voltage peripheral circuit, use the designated parts and make sure not modify the circuit.
Repairing except indicates causes rising of high voltage, and it emits an X-ray from the cathode-ray tube.

7. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

(INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the eternal exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]

If you have not the 500V insulation resistance meter, use a Tester.

[Note 2]

External exposure metal: Antenna terminal
Earphone jack

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

1. MODEL NUMBER and VERSION LETTER
   The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.
2. PART NO. and DESCRIPTION
   You can find it in your SERVICE MANUAL.

IMPORTANT

Inferior silicon grease can damage IC's and transistors.
When replacing an IC's or transistors, use only specified silicon grease (YG6260M).
Remove all old silicon before applying new silicon.

CONTENTS

GENERAL SPECIFICATIONS

G-1	**TV System**	CRT		CRT Size / Visual Size	14 inch / 335.4mmV
				CRT Type	Normal
				Deflection	90 degree
				Magnetic Field BV/BH	+0.45G/0.18G
		Color System			PAL
		Speaker			1Speaker
				Position	Bottom
				Size	3 Inch
				Impedance	8 ohm
		Sound Output		MAX	1.0 W
				10%(Typical)	0.8 W
		PAL60Hz			Yes
G-2	**Tuning System**	Broadcasting System			U.K. System I
		Tuner and Receive CH		System	1Tuner
				Destination	UK
				Tuning System	F-Synth
				Input Impedance	VHF/UHF 75 ohm
				CH Coverage	21 - 69
		Intermediate Frequency		Picture(FP)	39.5MHz
				Sound(FS)	33.5MHz
				FP-FS	6.0MHz
		Preset CH			80
		Stereo/Dual TV Sound			No
		Tuner Sound Muting			Yes
G-3	**Power**	Power Source		AC	230V AC 50Hz
				DC	
		Power Consumption		at AC	44 W at AC 230 V 50 Hz
				Stand by (at AC)	7 W at AC 230 V 50 Hz
				Per Year	-- kWh/Year
		Protector		Power Fuse	Yes
G-4	**Regulation**			Safety	CE
				Radiation	CE
				X-Radiation	-
G-5	**Temperature**			Operation	+5ºC ~ +40ºC
				Storage	-20ºC ~ +60ºC
G-6	**Operating Humidity**				Less than 80% RH
G-7	**On Screen Display**	Menu			Yes
			Menu Type		Character
			Picture		Yes
				Contrast	Yes
				Brightness	Yes
				Color	Yes
				Tint	No
				Sharpness	Yes
			Audio		No
				Bass	No
				Treble	No
				Balance	No
				BBE On/Off	No
				Stable Sound On/Off	No
			CH Tuning		Yes
				Manual	Yes
				Auto	Yes
				CH Allocation	Yes
			Language		Yes
			Clock Set		No
			On/Off Timer Set		No
			Pin Code Registration		No
			Nicam Auto Off		No
			Colour System		No
			Sound System		No
			AV2 Output Source		No
			HELPLINE		No
			Control Level		Yes
				Volume	Yes
				Brightness	Yes
				Contrast	Yes
				Color	Yes
				Tint (NTSC Only)	No
				Sharpness	Yes
				Tuning	Yes
				Bass	No
				Treble	No
				Balance	No
				Back Light	No

GENERAL SPECIFICATIONS

No.	Item	Sub-item	Detail	Specification
		Nicam ST		No
		Tone 1/2		No
		Pin Code		No
		AV		Yes
		Skip		Yes
		Channel		Yes
		Hotel Lock		No
		Sleep Timer		Yes
		Sound Mute		Yes
G-8	**OSD Language**			English French Spanish German Italian
G-9	**Clock and Timer**	Sleep Timer	Max Time	120 Min
			Step	10 Min
		On/Off Timer	Program(On Timer / Off Timer)	No
		Wake Up Timer		No
		Timer Back-up (at Power Off Mode)	more than	-- Min Sec
G-10	**Remote Control**	Unit		RC-GE
		Glow in Dark Remocon		No
		Format		NEC
		Custom Code		80-63 h
		Power Source	Voltage(D.C)	3V
			UM size x pcs	UM-4 x 2 pcs
		Total Keys		31 Keys
		Keys	Power(Stand By)	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0 / AV	Yes
			CH Up	No
			CH Down	No
			Volume Up / +	Yes
			Volume Down / -	Yes
			Quick View	No
			Sleep	Yes
			Info(CH Call)	Yes
			Normal	No
			Menu	Yes
			Enter	Yes
			Mute	Yes
			Fine Tuning +	No
			Fine Tuning -	No
			Tone 1/2	No
		T'TEXT Keys	TEXT / MIX / TV	Yes
			CH Up / Page Up	Yes
			CH Down / Page Down	Yes
			Red	Yes
			Green	Yes
			Yellow / Fine Tuning -	Yes
			Cyan / Fine Tuning +	Yes
			F/T/B(Expand) / Normal	Yes
			Reveal / Skip	Yes
			Display Cancel	Yes
			Reset	Yes
			Reset / Tone 1/2	No
			Hold / Status	Yes
			Sub Page / Quick View	Yes
G-11	**Features**	Auto Degauss		Yes
		Auto Shut Off		Yes
		Canal+		No
		CATV		No
		Anti-theft		No
		Memory(Last CH)		Yes
		Memory(Last Volume)		Yes
		BBE		No
		Auto Search		Yes
		CH Allocation		Yes
		Fine Tuning		Yes
		Channel Lock		No
		Just Clock Function		No
		Game Position		No
		CH Label		No

GENERAL SPECIFICATIONS

Code	Item	Spec		Detail	Value
		VM Circuit			No
		Full OSD			No
		Unitext			Yes
		Fastext			No
		Top Text			No
		Premiere			No
		Comb Filter			No
					___ Lines
		Auto CH Memory			Yes
		Auto Set Up			No
		Stable Sound			No
		FBT Leak Test Protect			No
		Hotel Lock			No
		Power ON Memory			Yes
G-12	Accessories	Owner's Manual		Language	English
				w/Guarantee Card	No
		Remote Control Unit			Yes
		Rod Antenna			No
				Poles	Pole
				Terminal	type
		Loop Antenna			Yes
				Terminal	Din Type
		U/V Mixer			No
		DC Car Cord (Center+)			No
		Guarantee Card			No
		Warning Sheet			No
		Circuit Diagram			No
		Antenna Change Plug			No
		Service Facility List			No
		Important Safeguard			No
		Dew/AHC Caution Sheet			No
		AC Plug Adapter			No
		Quick Set-up Sheet			Yes
		Battery			Yes
				UM size x pcs	UM-4 x 2 pcs
				OEM Brand	No
		AC Cord			No
		AV Cord (2Pin-1Pin)			No
		Registration Card			No
		PTB Sheet			No
		300 ohm to 75 ohm Antenna Adapter			No
		Insurance Plan Leaflet			No
G-13	Interface	Switch	Front	Power	No
				System Select	No
				Main Power SW	Yes
				Sub Power	No
				Channel Up	Yes
				Channel Down	Yes
				Volume Up	Yes
				Volume Down	Yes
			Rear	AC/DC	No
				TV/CATV Selector	No
				Degauss	No
				Main Power SW	No
		Indicator		Power	No
				Stand-by	Yes
				On Timer	No
		Terminals	Front	Video Input	No
				Audio Input	No
				Other Terminal	Ear Phone
			Rear	Video Input(Rear1)	No
				Video Input(Rear2)	No
				Audio Input(Rear1)	No
				Audio Input(Rear2)	No
				Video Output	No
				Audio Output	No
				Euro Scart(21Pin)	Yes (x1)
				Component Input	No
				Diversity	No
				Ext Speaker	No
				DC Jack 12V(Center +)	No
				VHF/UHF Antenna Input	Din Type
				AC Outlet	No
G-14	Set Size			Approx. W x D x H (mm)	362 x 360 x 320.5
G-15	Weight			Net (Approx.)	9.5 kg (--- lbs)
				Gross (Approx.)	11.5kg (---lbs)
G-16	Carton		Master Carton		No

GENERAL SPECIFICATIONS

			Content	---- Sets
			Material	-- /--
			Dimensions W x D x H(mm)	-- x -- x --
			Description of Origin	No
		Gift Box		Yes
			Material	Double/Full Color
			Dimensions W x D x H(mm)	440 x 408 x 380
			Design	As per Buyer's
			Description of Origin	No
		Drop Test		Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces
			Height (cm)	62
		Container Stuffing		866 Sets/40' container
G-17	**Material**	Cabinet	Cabinet Front	PS 94V0 DECABROM
			Cabinet Rear	PS 94V0 DECABROM
		PCB	Non-Halogen Demand	No
			Eyelet Demand	No
G-18	**Environment**	Pb Free	Lead-free Solder	No
			Other	No
		Cd Free		No

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF ANODE CAP

Read the following **NOTED** items before starting work.

* After turning the power off there might still be a potential voltage that is very dangerous. When removing the Anode Cap, make sure to discharge the Anode Cap's potential voltage.
* Do not use pliers to loosen or tighten the Anode Cap terminal, this may cause the spring to be damaged.

REMOVAL

1. Follow the steps as follows to discharge the Anode Cap. **(Refer to Fig. 1-1.)**
   Connect one end of an Alligator Clip to the metal part of a flat-blade screwdriver and the other end to ground.
   While holding the plastic part of the insulated Screwdriver, touch the support of the Anode with the tip of the Screwdriver.
   A cracking noise will be heard as the voltage is discharged.

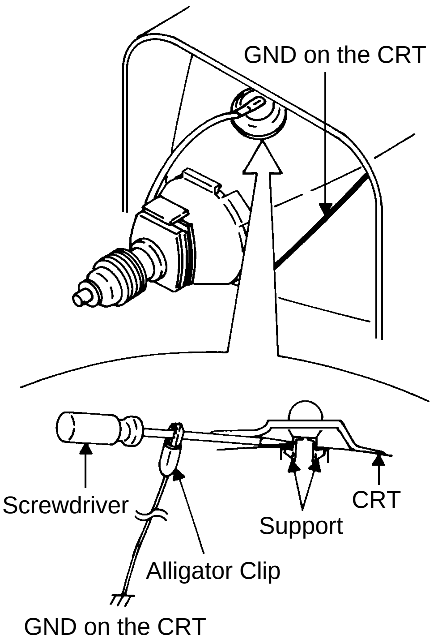


Fig. 1-1

2. Flip up the sides of the Rubber Cap in the direction of the arrow and remove one side of the support.
   (Refer to Fig. 1-2.)

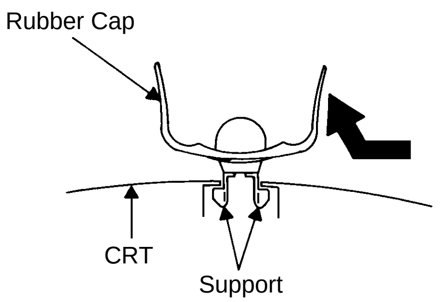


Fig. 1-2

3. After one side is removed, pull in the opposite direction to remove the other.

NOTE

Take care not to damage the Rubber Cap.

INSTALLATION

1. Clean the spot where the cap was located with a small amount of alcohol. **(Refer to Fig. 1-3.)**

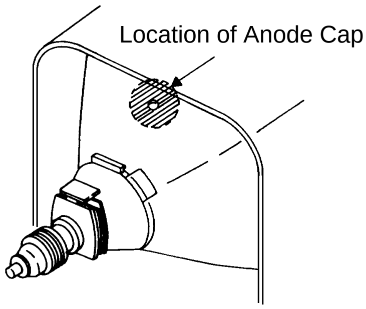
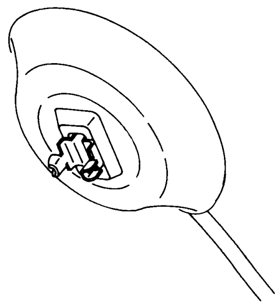


Fig. 1-3

NOTE

Confirm that there is no dirt, dust, etc. at the spot where the cap was located.

2. Arrange the wire of the Anode Cap and make sure the wire is not twisted.
3. Turn over the Rubber Cap. **(Refer to Fig. 1-4.)**


Fig. 1-4

4. Insert one end of the Anode Support into the anode button, then the other as shown in **Fig. 1-5.**

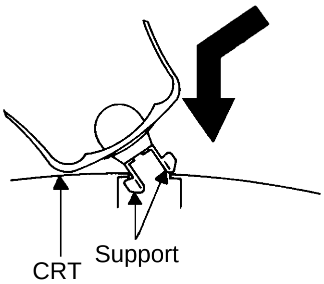


Fig. 1-5

5. Confirm that the Support is securely connected.
6. Put on the Rubber Cap without moving any parts.

DISASSEMBLY INSTRUCTIONS

2. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put the Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. **(Refer to Fig. 2-1.)**

   NOTE

   Masking is carried out on all the parts located within 10 mm distance from IC leads.

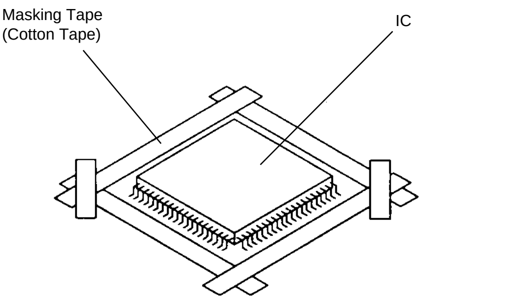


Fig. 2-1

2. Heat the IC leads using a blower type IC desoldering machine. **(Refer to Fig. 2-2.)**

   NOTE

   Do not add the rotating and the back and forth directions force on the IC, until IC can move back and forth easily after desoldering the IC leads completely.

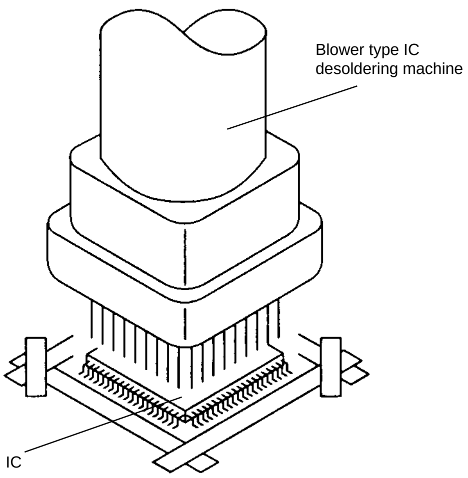


Fig. 2-2

3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using a tweezers and remove the IC by moving with the IC desoldering machine. **(Refer to Fig. 2-3.)**

   NOTE

   Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.

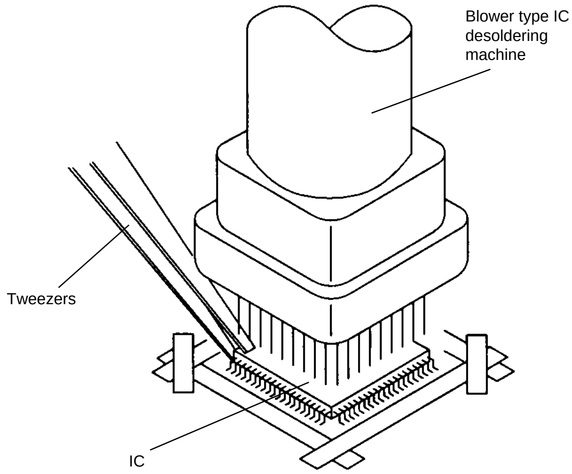


Fig. 2-3

4. Peel off the Masking Tape.

5. Absorb the solder left on the pattern using the Braided Shield Wire. **(Refer to Fig. 2-4.)**

   NOTE

   Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.

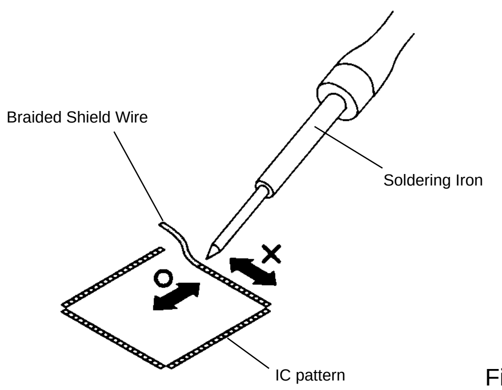


Fig. 2-4

DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. **(Refer to Fig. 2-5.)**

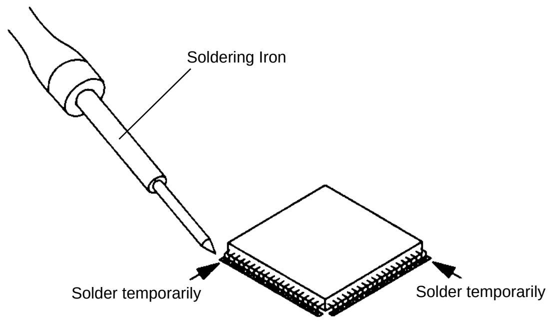


Fig. 2-5

2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 2-6.)**

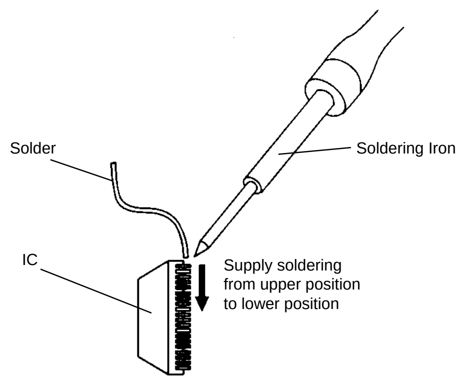


Fig. 2-6

3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 2-7.)**

   NOTE

   Do not absorb the solder to excess.

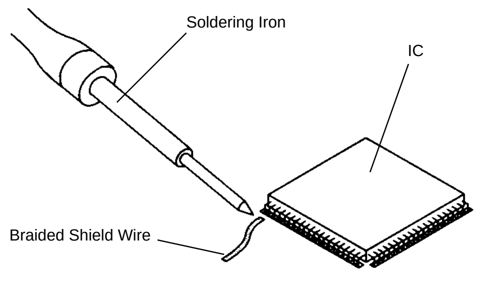


Fig. 2-7

4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. **(Refer to Fig. 2-8.)**

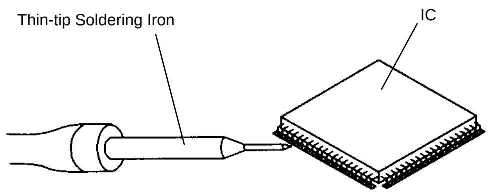


Fig. 2-8

5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass.
   Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

   NOTE

   When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, be always sure to replace the IC in this case.

SERVICE MODE LIST

This unit provided with the following SERVICE MODES so you can repair, examine and adjust easily.
To enter the Service Mode, press both set key and remote control key for more than 2 seconds.

Set Key	Remocon Key	Operations
VOL. (-) MIN	0	Reset the user setting items (PICTURE, VOLUME and LANGUAGE) to the initial state for delivery.
VOL. (-) MIN	1	Initialization of the factory. NOTE: Do not use this for the normal servicing.
VOL. (-) MIN	6	POWER ON total hours is displayed on the screen. Refer to the "CONFIRMATION OF HOURS USED". Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
VOL. (-) MIN	8	Writing of EEPROM initial data. NOTE: Do not use this for the normal servicing.
VOL. (-) MIN	9	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).

CONFIRMATION OF HOURS USED

POWER ON total hours can be checked on the screen. Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".

1. Set the VOLUME to minimum.
2. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 second.
3. After the confirmation of using hours, turn off the power.

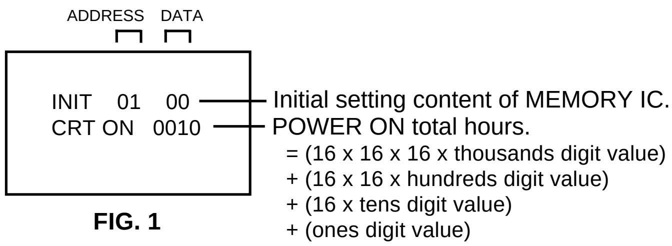


FIG. 1

WHEN REPLACING EEPROM (MEMORY) IC

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to TABLE 1.

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
00	---	00	00	00	00	19	60	40	00	41	00	01	03	00	00	00
10	10	00	80	80	80	00	00	---	---	---	---	---	---	---	---	---

Table 1

1. Enter DATA SET mode by setting VOLUME to minimum.
2. While holding down VOLUME button on front cabinet, press key 6 on remote control for more than 2 seconds.

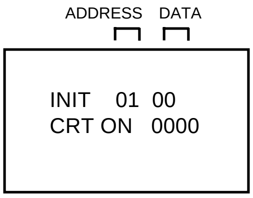


Fig. 1

3. ADDRESS is now selected and should "blink". Using the VOL. +/- button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
4. Press ENTER to select DATA. When DATA is selected, it will "blink".
5. Again, step through the DATA using VOL. +/- button until required DATA value has been selected.
6. Pressing ENTER will take you back to ADDRESS for further selection if necessary.
7. Repeat steps 3 to 6 until all data has been checked.
8. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

After the data input, set to the initializing of shipping.

9. Turn POWER on.
10. While holding down VOLUME button on front cabinet, press key 1 on remote control for more than 2 seconds.
11. After the finishing of the initializing of shipping, the unit will turn off automatically.

The unit will now have the correct DATA for the new MEMORY IC.

ELECTRICAL ADJUSTMENTS

1. BEFORE MAKING ELECTRICAL ADJUSTMENTS

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- Before removing the anode cap, discharge electricity because it contains high voltage.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor for a heat sink, apply the silicon grease **(YG6260M)** on the contact section of the heat sink. Befor applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

Prepare the following measurement tools for electrical adjustments.

1. Oscilloscope
2. Digital Voltmeter
3. Pattern Generator

On-Screen Display Adjustment

1. In the condition of NO indication on the screen.
   Press the VOL. DOWN button on the set and the Channel button **(9)** on the remote control for more than 2 seconds to appear the adjustment mode on the screen as shown in **Fig. 1-1**.

TV

35 H. POSI OSD 128

Fig. 1-1

2. Use the Channel UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2**.
3. Press the MENU button on the remote control to end the adjustments.

NO.	FUNCTION	NO.	FUNCTION
00	CUT OFF	20	TINT
01	RF AGC	21	SHARP
02	AGC GAIN	22	CONT CENT
03	R DRIVE	23	CONT MAX
04	R CUT OFF	24	CONT MIN
05	G DRIVE	25	COLOR CENT
06	G CUT OFF	26	COLOR MAX
07	B DRIVE	27	COLOR MIN
08	H POSI 50	28	M R CUT OFF
09	V POSI 50	29	M G CUT OFF
10	V POSI 60	30	M B CUT OFF
11	V SIZE 50	31	CVBS OUT
12	V SIZE 60	32	APR THR
13	VCO COASE	33	BELL
14	VCO FINE	34	BANDPASS
15	-	35	H POSI OSD
16	-	36	V POSI OSD
17	BRIGHT CENT	37	H POSI TXT
18	BRIGHT MAX	38	V POSI TXT
19	BRIGHT MIN	39	H POSI 60

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: AGC VOLTAGE

1. Place the set with Aging Test for more than 15 minutes.
2. Receive the UHF (63 ± 1dB).
3. Connect the digital voltmeter between the **TP002** and **the (GND) of TU001**.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(01)** on the remote control to select "RF AGC".
5. Press the VOL. UP/DOWN button on the remote control until the digital voltmeter is 2.10 ± 0.05V.

2-2: CUT OFF

1. Place the set with Aging Test for more than 15 minutes.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(00)** on the remote control to select "CUT OFF".
4. Adjust the **Screen Volume** until a dim raster is obtained.

2-3: WHITE BALANCE

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set with Aging Test for more than 10 minutes.
2. Receive the white 100% signal from the Pattern Generator.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(04)** on the remote control to select "R CUT OFF".
5. Using the VOL. UP/DOWN button on the remote control, adjust the R CUT OFF.
6. Press the CH. UP/DOWN button on the remote control to select the "R DRIVE", "G DRIVE", "G CUT OFF" or "B DRIVE".
7. Using the VOL. UP/DOWN button on the remote control, adjust the R DRIVE, G DRIVE, G CUT OFF or B DRIVE.
8. Perform the above adjustments 6 and 7 until the white color is looked like a white.

2-4: FOCUS

1. Receive the monoscope pattern.
2. Turn the Focus Volume fully counterclockwise once.
3. Adjust the **Focus Volume** until picture is distinct.

2-5: CONSTANT VOLTAGE

1. Place the set with Aging Test for more than 15 minutes.
2. Using the remote control, set the brightness and contrast to normal position.
3. Connect the digital voltmeter to **TP501**.
4. Set condition is AV MODE without signal.
5. Adjust the **VR501** until the digital voltmeter is 135 ± 0.5V.

2-6: VERTICAL LINEARITY

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Adjust the **VR420** until the SHIFT quantity of the OVER SCAN on upside and downside becomes minimum.

ELECTRICAL ADJUSTMENTS

2-7: HORIZONTAL POSITION

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(08)** on the remote control to select "H POSI(50)".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes minimum.
5. Receive the monoscope pattern of NTSC.
6. Using the remote control, set the brightness and contrast to normal position.
7. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(39)** on the remote control to select "H POSI(60)".
8. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes minimum.

2-8: VERTICAL SIZE

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(11)** on the remote control to select "V SIZE(50)".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes 8 ± 3%.
5. Receive the monoscope pattern of NTSC.
6. Using the remote control, set the brightness and contrast to normal position.
7. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(12)** on the remote control to select "V SIZE(60)".
8. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes 8 ± 3%.

2-9: BRIGHT CENT

1. Place the set with Aging Test for more than 15 minutes.
2. Receive the monoscope pattern. (RF Input)
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(17)** on the remote control to select "BRIGHT CENT".
5. Press the VOL. UP/DOWN button on the remote control until the white 25% is starting to be visible.
6. Receive the monoscope pattern. (Audio Video Input)
7. Press the AV button on the remote control to set to the AV mode. Then perform the above adjustments 3~5.

2-10: CONT CENT

1. Place the set with Aging Test for more than 15 minutes.
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(22)** on the remote control to
3. select "CONT CENT".
4. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "30".
5. Press the AV button on the remote control to set the AV mode. Then perform the above adjustments 1, 2.

2-11: COLOR CENT

1. Receive the color bar pattern. (RF Input)
2. Connect the oscilloscope to **TP023**.
3. Using the remote control, set the brightness, contrast and color to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(25)** on the remote control to select "COLOR CENT".
5. Adjust the VOLTS RANGE VARIABLE knob of the oscilloscope until the range between white 100% and 0% is set to 5 scales on the screen of the oscilloscope.
6. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 85 ± 10% for the white level. **(Refer to Fig. 2-2)**
7. Receive the color bar pattern. (Audio Video Input)
8. Press the AV button on the remote control to set the AV mode. Then perform the above adjustments 2~6.

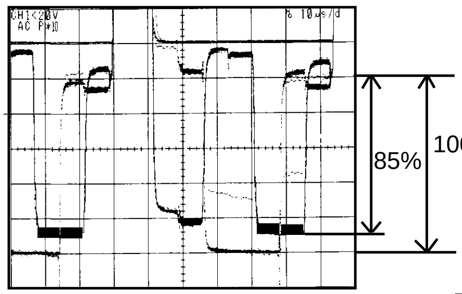


Fig. 2-2

2-12: VCO COASE/VCO FINE

1. Connect the oscillator (39.5MHz) to between the **TP003** and **the (GND) of TU001**.
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(13)** on the remote control to select "VCO COASE".
3. Press the VOL. UP/DOWN button on the remote control until the "+" appear on the screen.
4. Press the CH UP button once to set to "VCO FINE" mode.
5. Press the VOL. UP/DOWN button on the remote control to select the 4 step down point from the upper limit on the "+".
   (Example: In case of the "+" point 30~41, select 37.)

2-13: VERTICAL POSITION

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(09)** on the remote control to select "V POSI(50)".
4. Check if the step No. V. POSI is "08".
5. Adjust the **VR401** until the horizontal line becomes fit to notch of the shadow mask.

ELECTRICAL ADJUSTMENTS

2-14 : Confirmation of Fixed Value (Step No.)

Please check if the fixed values of the each adjustment items are set correctly referring below.

NO.	FUNCTION	RF	AV
02	AGC GAIN	00	---
04	R CUTOFF	00	---
06	G CUTOFF	00	---
07	B DRIVE	31	---
10	V POSI 50/60	08	---
18	BRIGHT MAX	37	37
19	BRIGHT MIN	10	10
20	TINT	32	32
21	SHARP	04	04
23	CONT MAX	50	50
24	CONT MIN	10	10
26	COLOR MAX	39	39
27	COLOR MIN	14	14
30	MB CUTPOFF	80	---
31	CVBS OUT	16	---
32	APR THR	04	---
33	BELL	10	---
34	BANDPASS	06	---
35	H POSI OSD	128	---
36	V POSI OSD	50	---
37	H POSI TXT	122	---
38	V POSI TXT	58	---

ELECTRICAL ADJUSTMENTS

3. PURITY AND CONVERGENCE ADJUSTMENTS

NOTE

1. Turn the unit on and let it warm up for at least 30 minutes before performing the following adjustments.
2. Place the CRT surface facing east or west to reduce the terrestrial magnetism.
3. Turn ON the unit and demagnetize with a Degauss Coil.

3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)

1. Tighten the screw for the magnet. Refer to the adjusted CRT for the position. **(Refer to Fig. 3-1)**
   If the deflection yoke and magnet are in one body, untighten the screw for the body.
2. Receive the green raster pattern from the color bar generator.
3. Slide the deflection yoke until it touches the funnel side of the CRT.
4. Adjust center of screen to green, with red and blue on the sides, using the pair of purity magnets.
5. Switch the color bar generator from the green raster pattern to the crosshatch pattern.
6. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
7. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.
8. Adjust the crosshatch pattern to change to white by repeating steps 6 and 7.

3-2: PURITY

NOTE

Adjust after performing adjustments in section 3-1.

1. Receive the green raster pattern from color bar generator.
2. Adjust the pair of purity magnets to center the color on the screen.
   Adjust the pair of purity magnets so the color at the ends are equally wide.
3. Move the deflection yoke backward (to neck side) slowly, and stop it at the position when the whole screen is green.
4. Confirm red and blue colors.
5. Adjust the slant of the deflection yoke while watching the screen, then tighten the fixing screw.

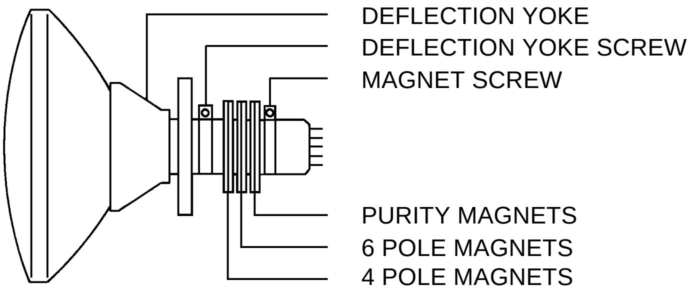


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

1. Receive the crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-3.

1. Adjust the differences around the screen by moving the deflection yoke upward/downward and right/left. **(Refer to Fig. 3-2-a)**
2. Insert three wedges between the deflection yoke and CRT funnel to fix the deflection yoke. **(Refer to Fig. 3-2-b)**

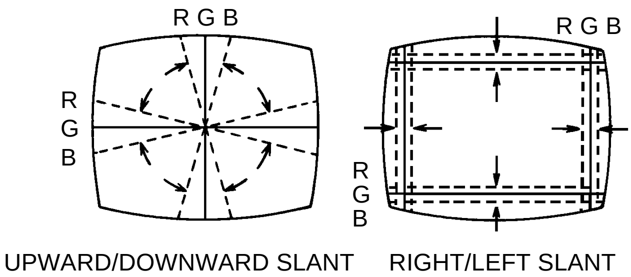
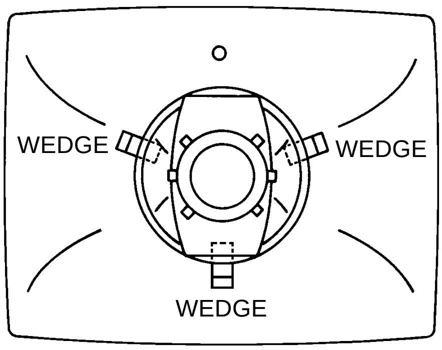


Fig. 3-2-a

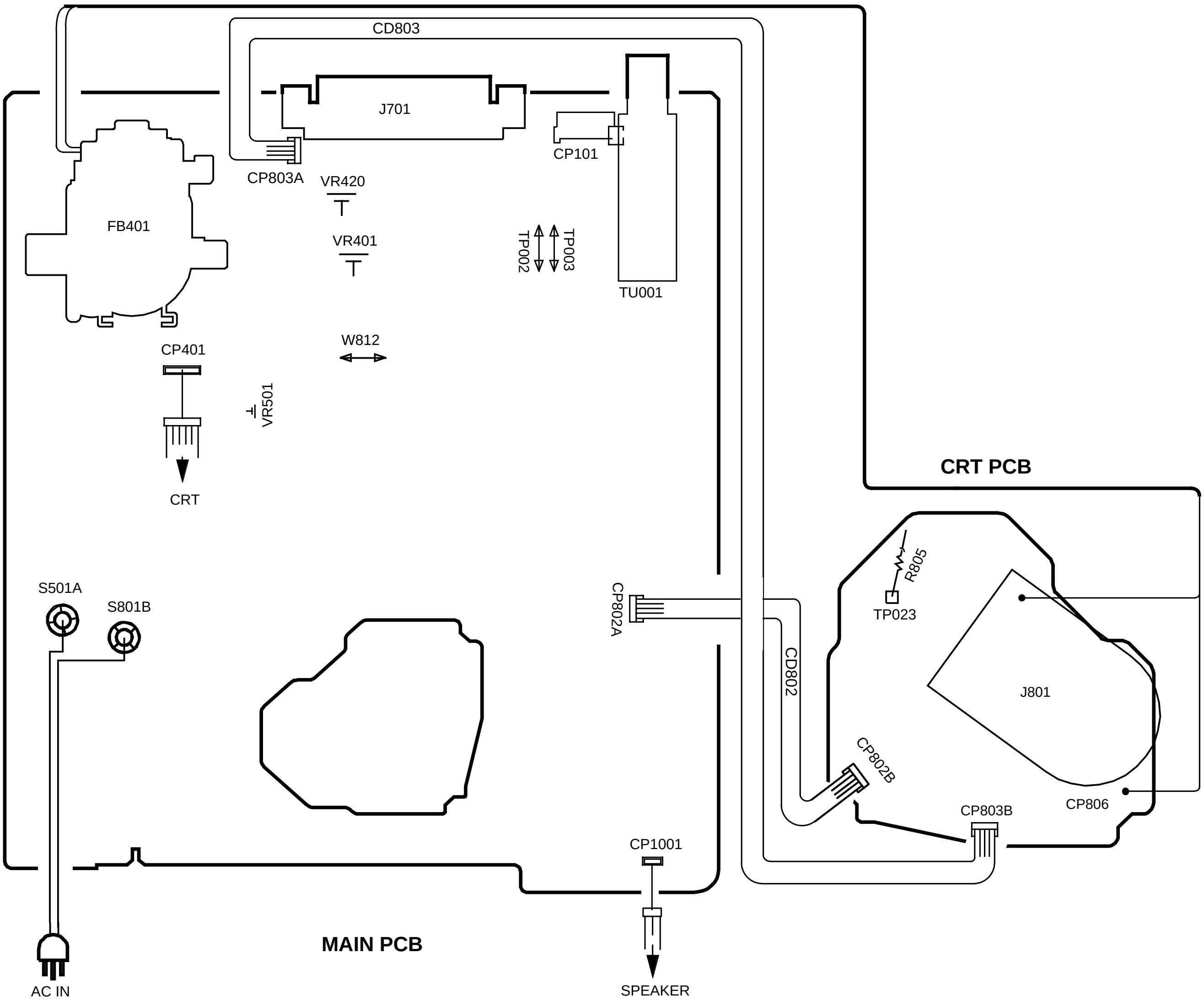


WEDGE POSITION

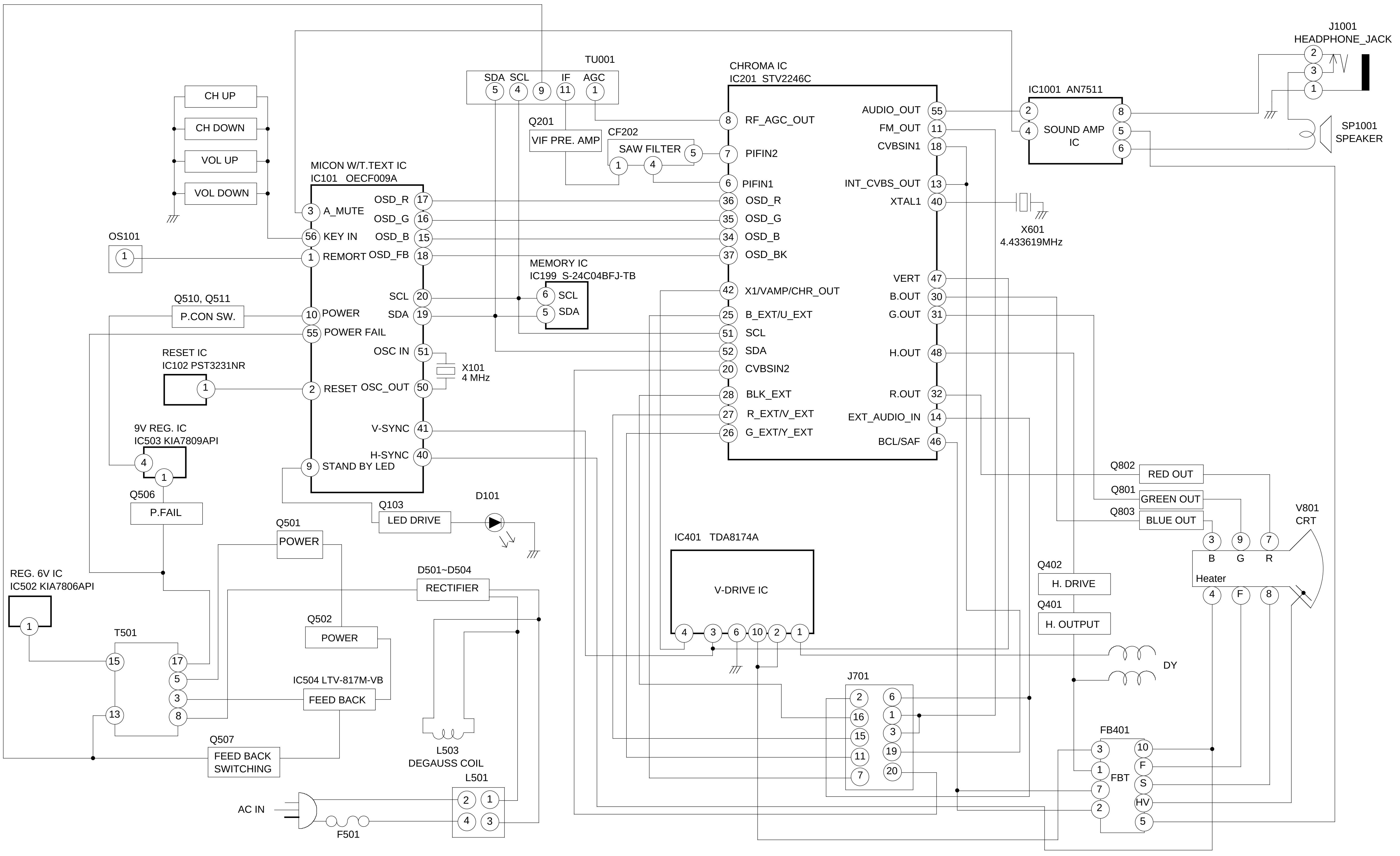
Fig. 3-2-b

ELECTRICAL ADJUSTMENTS

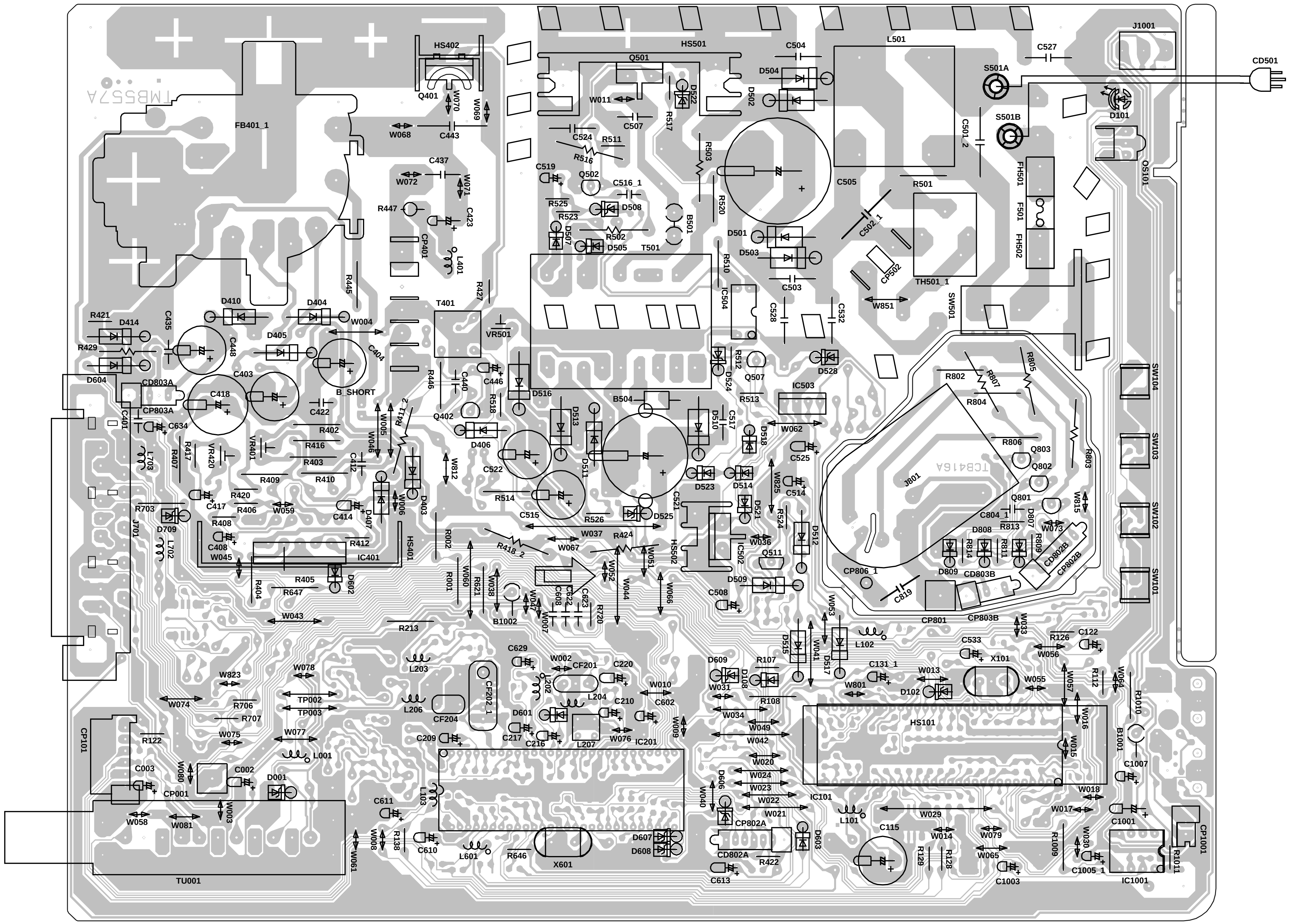
4. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)



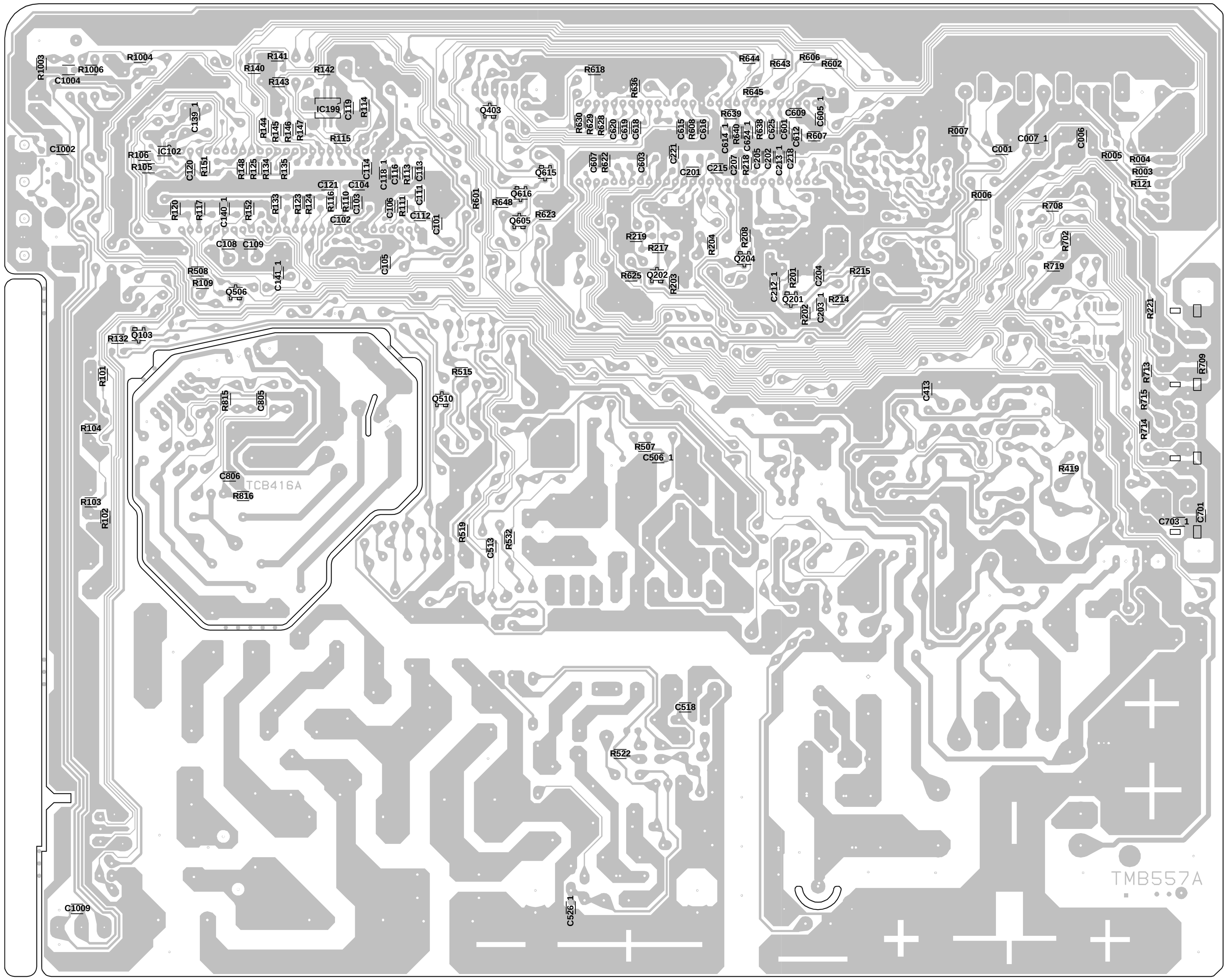
BLOCK DIAGRAM



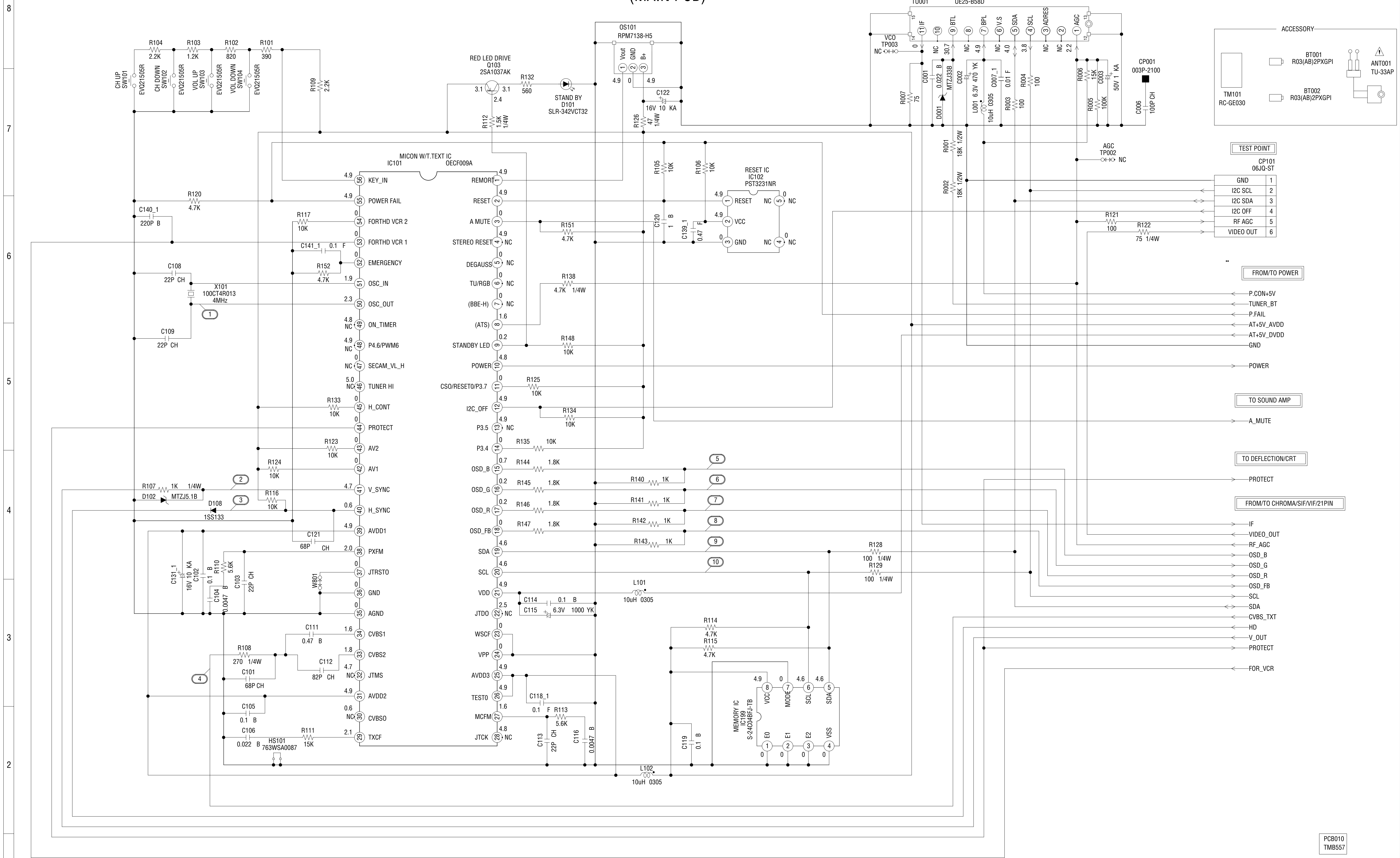
PRINTED CIRCUIT BOARDS
MAIN/CRT (INSERTED PARTS)
SOLDER SIDE



PRINTED CIRCUIT BOARDS
MAIN/CRT (CHIP MOUNTED PARTS)
SOLDER SIDE



MICON/TUNER SCHEMATIC DIAGRAM
(MAIN PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

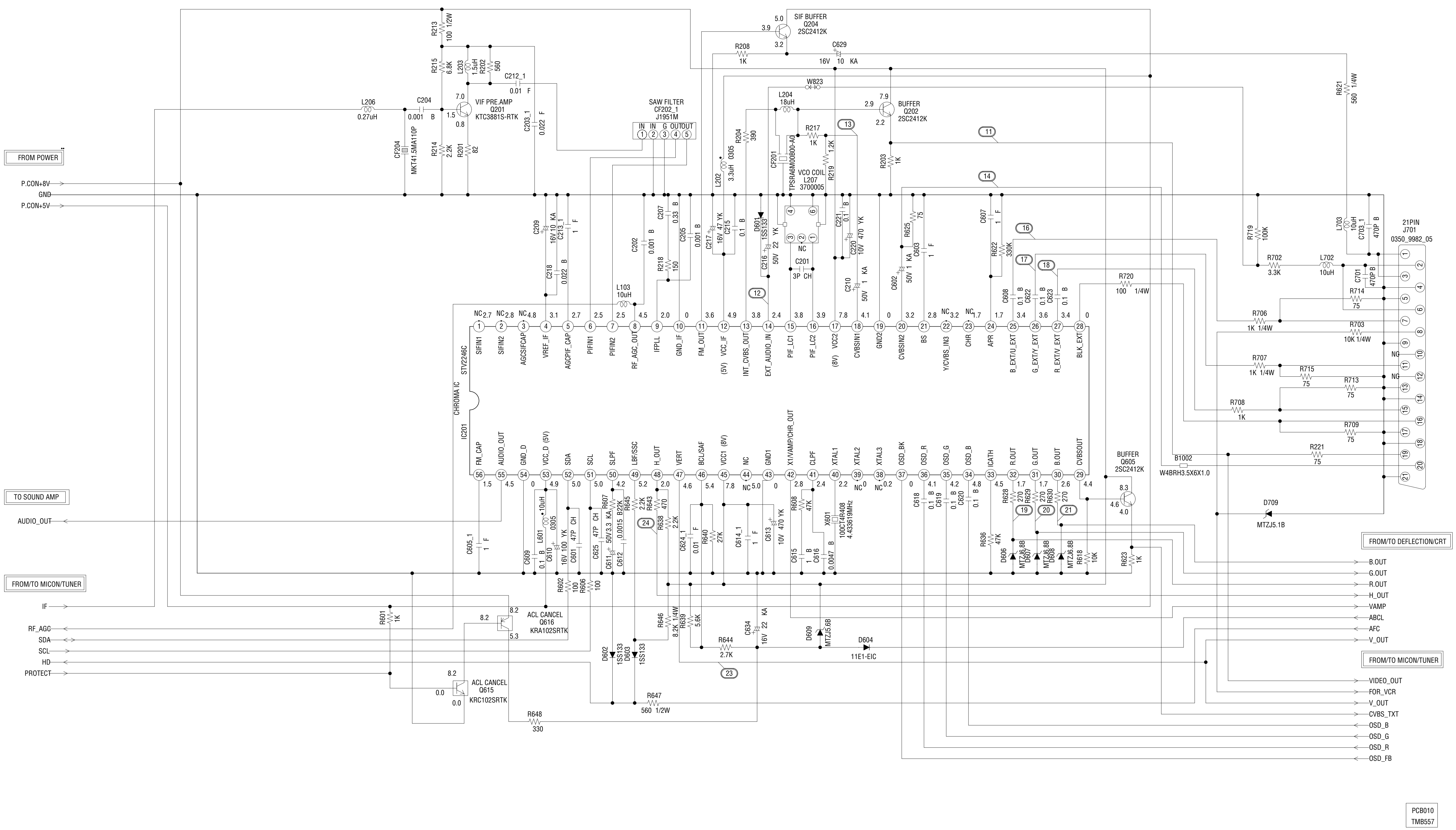
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

CHROMA/SIF/VIF/21PIN SCHEMATIC DIAGRAM

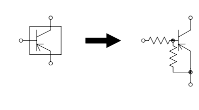
(MAIN PCB)



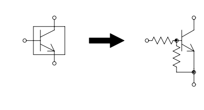
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: DIGITAL TRANSISTOR

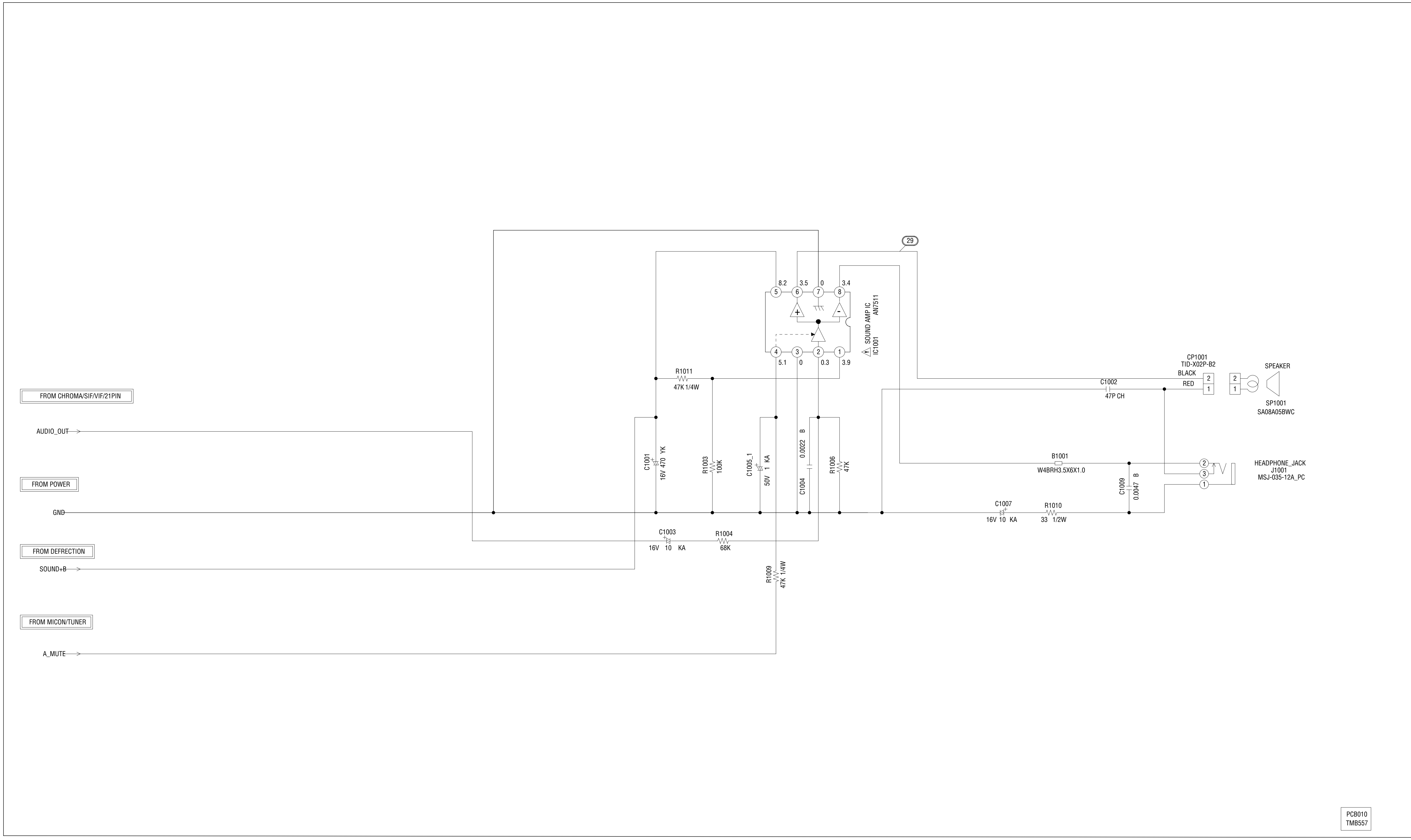


CAUTION: DIGITAL TRANSISTOR



SOUND AMP/FRONT AV SCHEMATIC DIAGRAM

(MAIN PCB)



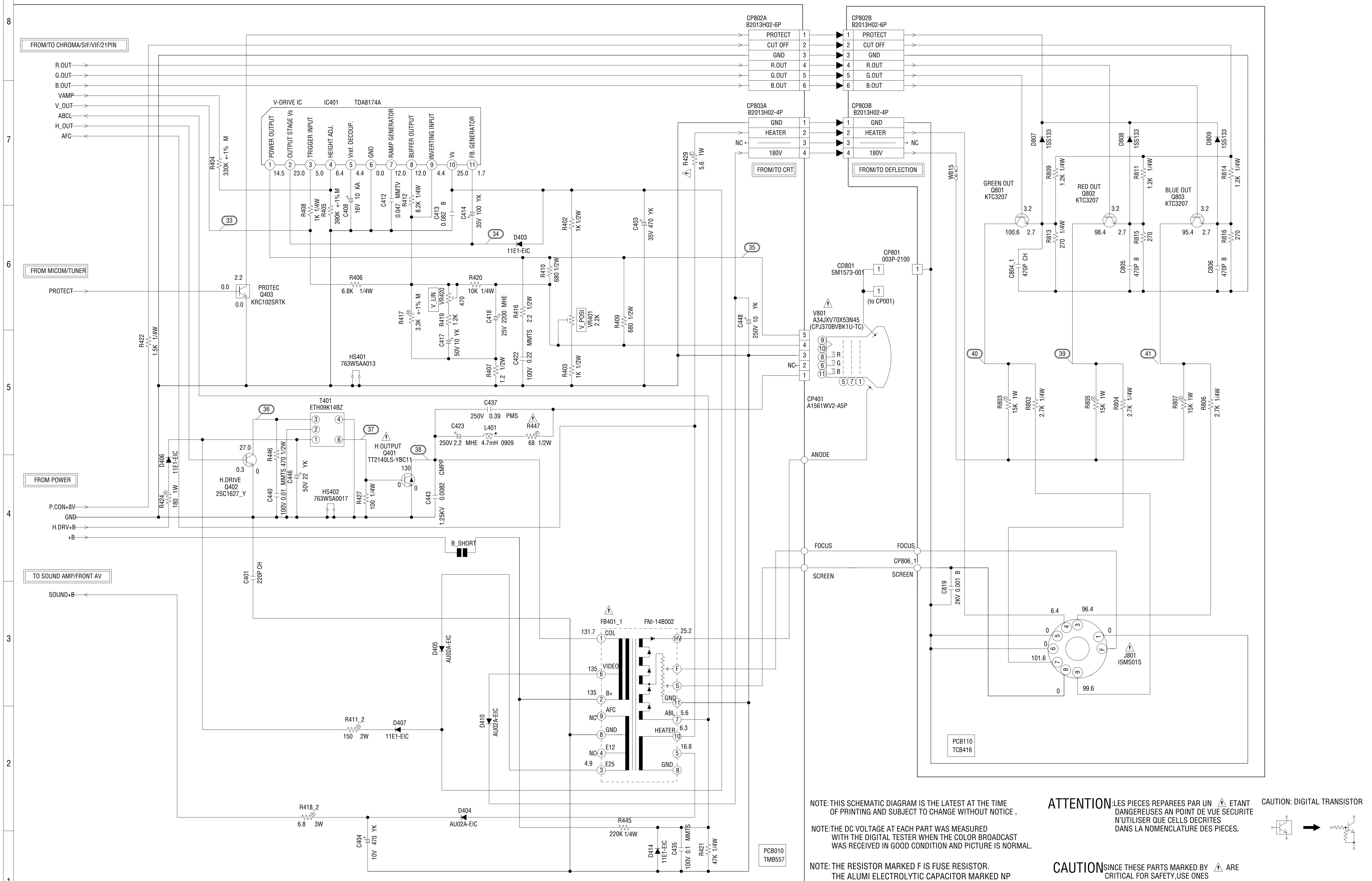
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY.

DEFLECTION/CRT SCHEMATIC DIAGRAM (MAIN PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

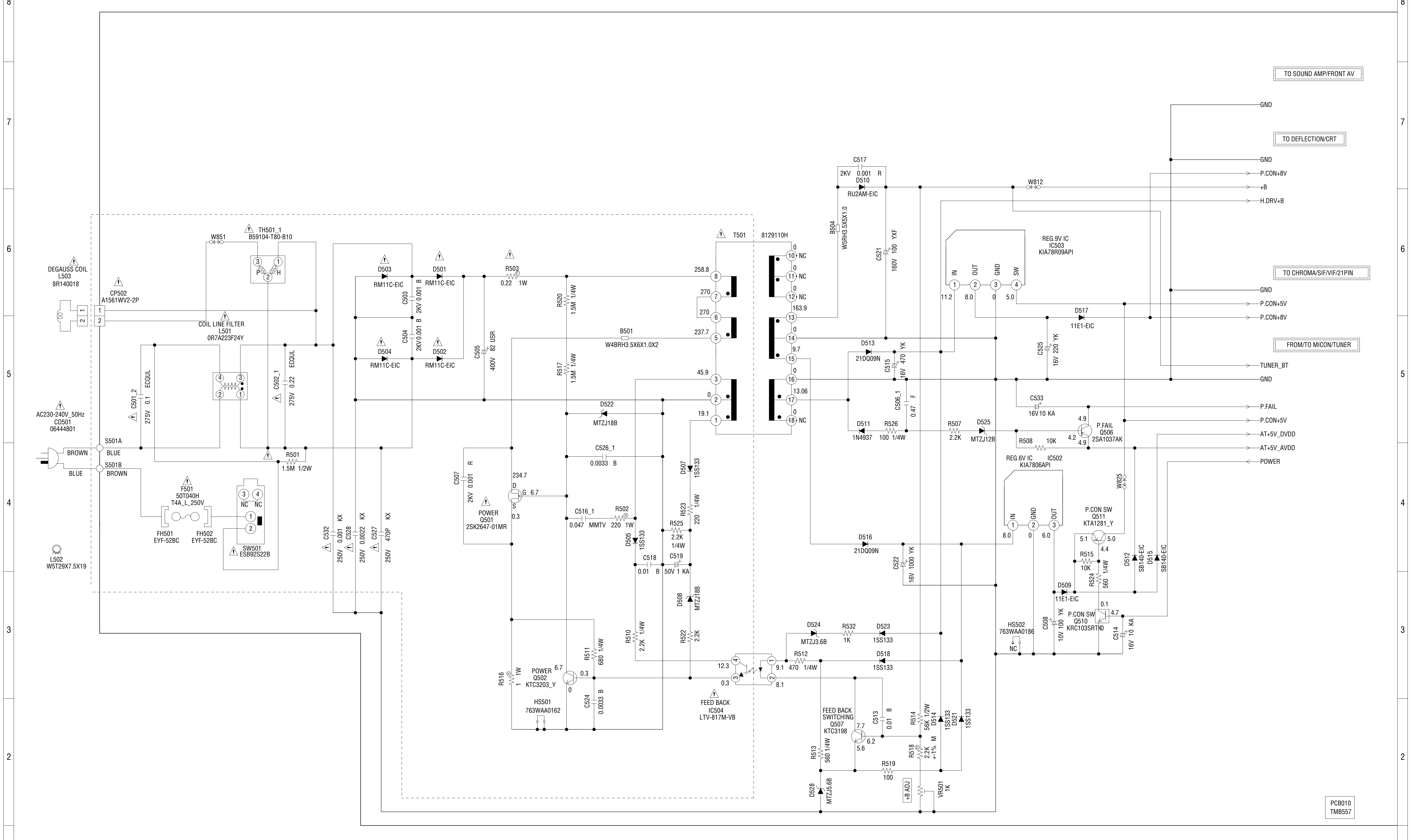
NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR. THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP IS NON POLAR ONE.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

CAUTION: DIGITAL TRANSISTOR

POWER SCHEMATIC DIAGRAM
(MAIN PCB)



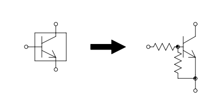
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

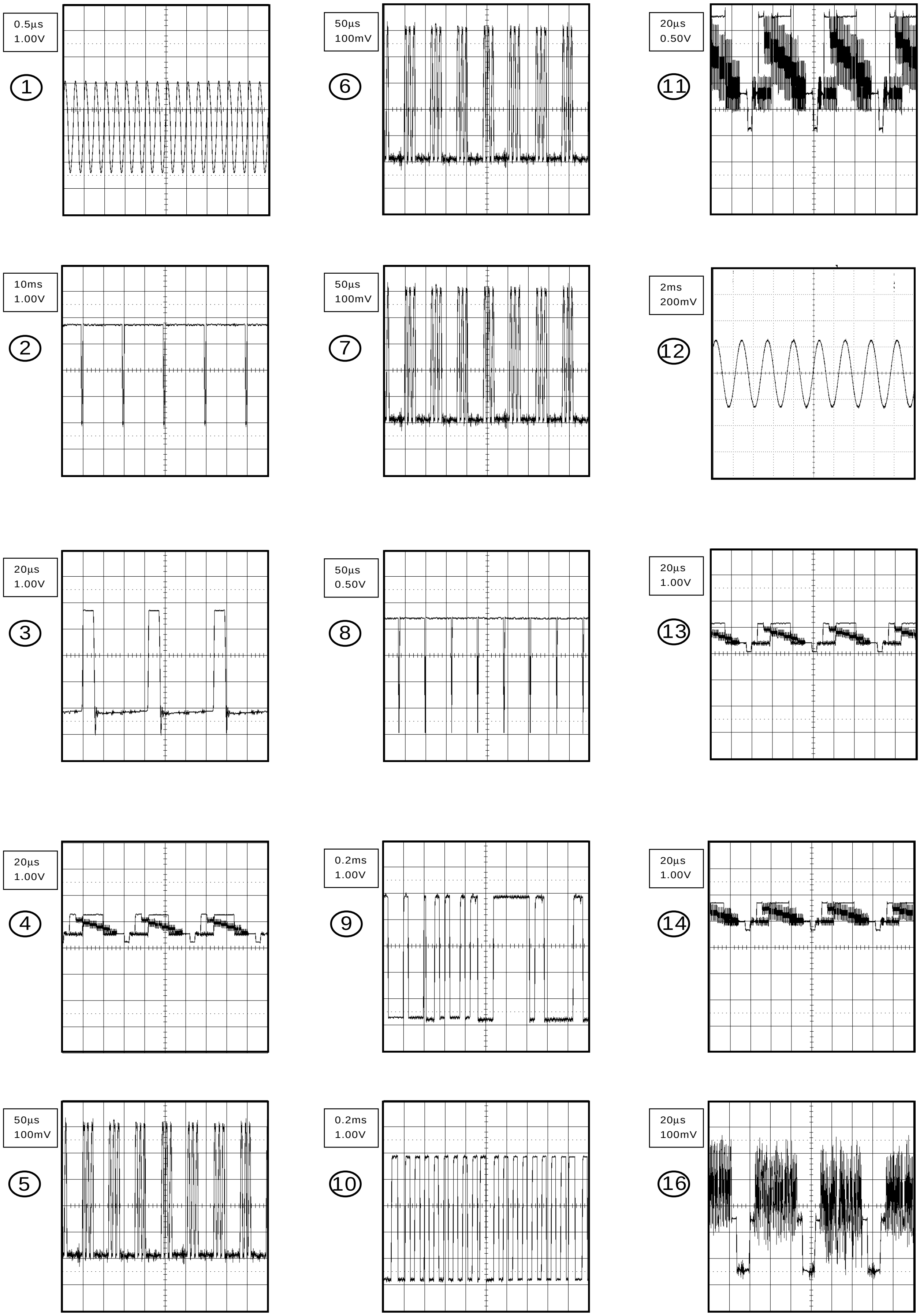
CAUTION: DIGITAL TRANSISTOR



WAVEFORMS

MICON/TUNER

CHROMA/SIF/VIF/21PIN

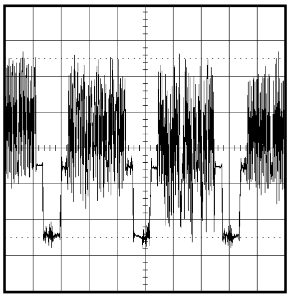


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

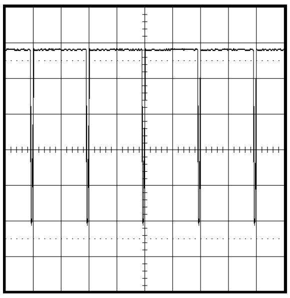
20µs
1.00V

(17)



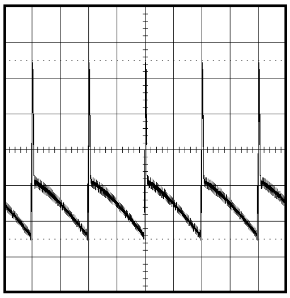
10ms
1.00V

(23)



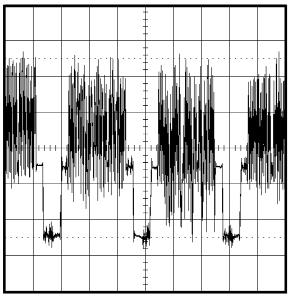
10ms
10.0V

(35)



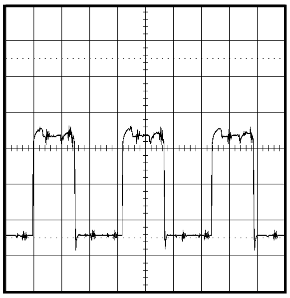
20µs
100mV

(18)



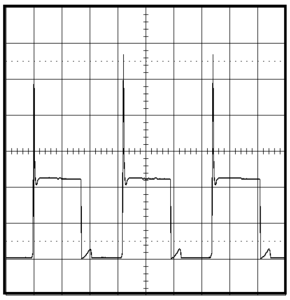
20µs
200mV

(24)



20µs
10.0V

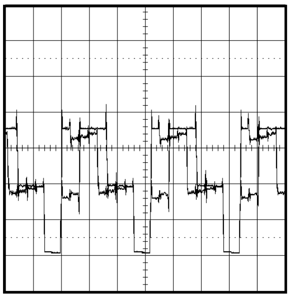
(36)



SOUND AMP/FRONT AV

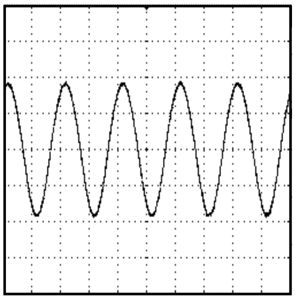
20µs
1.00V

(19)



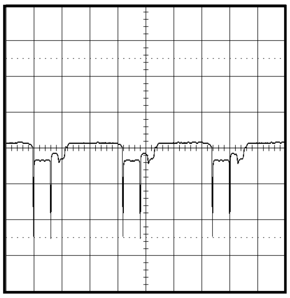
500us
500mV

(29)



20µs
5.0V

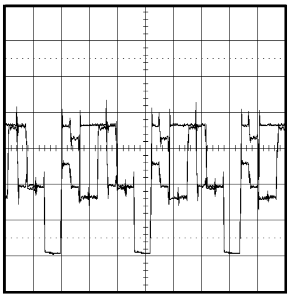
(37)



DEFLECTION/CRT

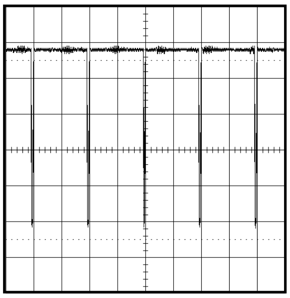
20µs
1.00V

(20)



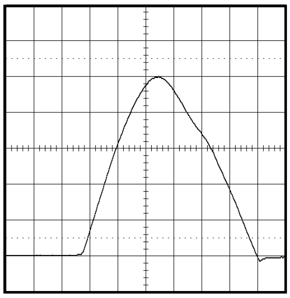
10ms
1.00V

(33)



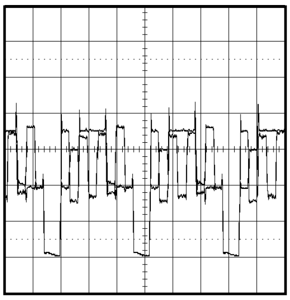
2µs
200V

(38)



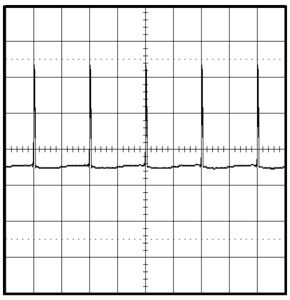
20µs
1.00V

(21)



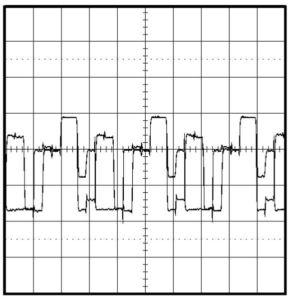
10ms
10.0V

(34)



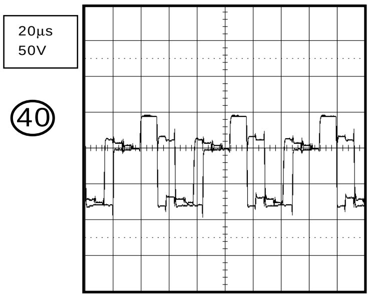
20µs
50V

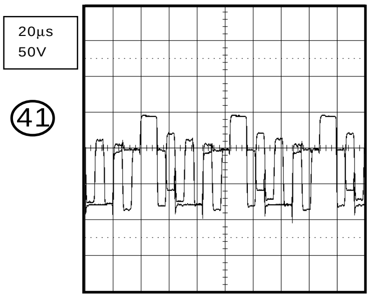
(39)



NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

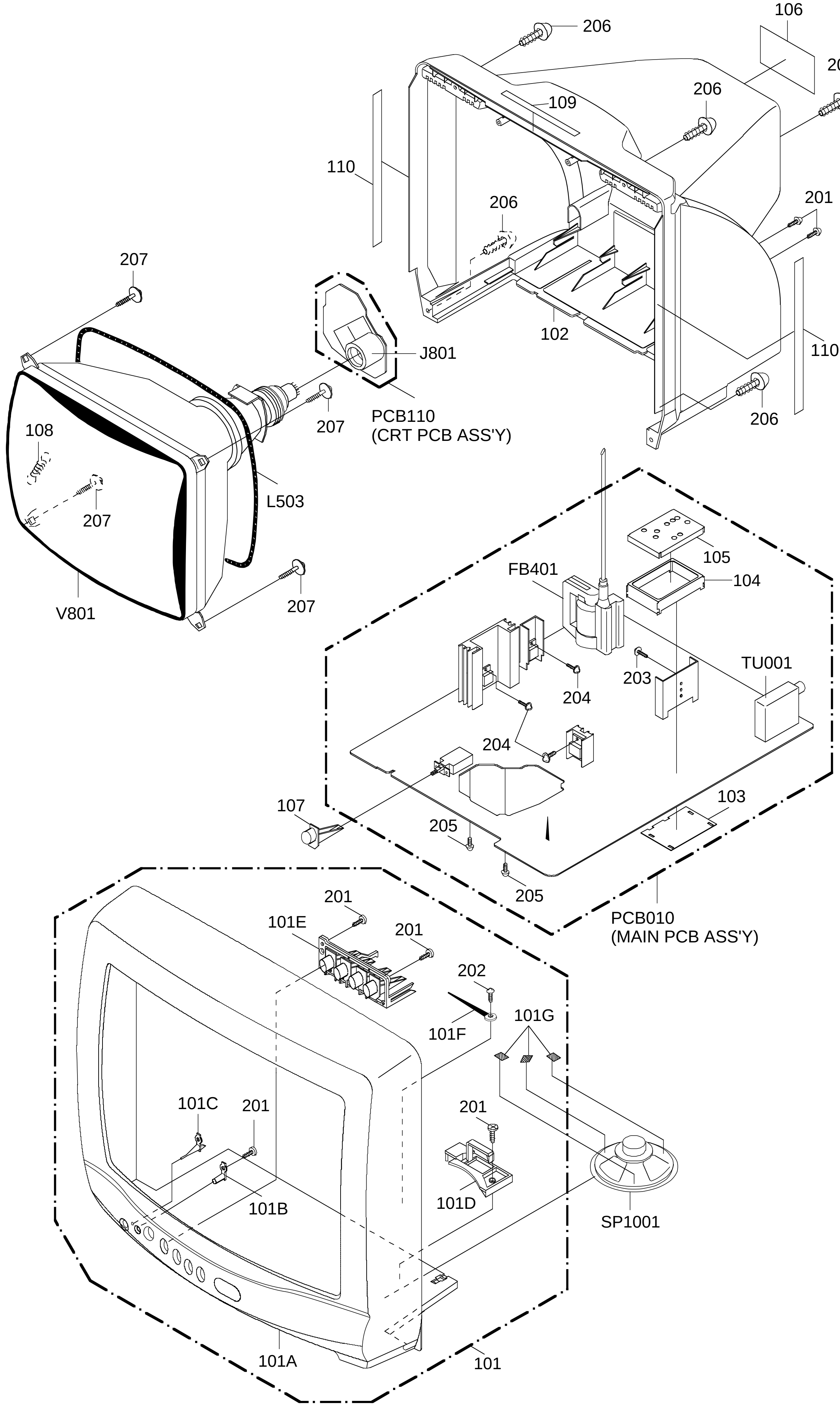
WAVEFORMS





NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

MECHANICAL EXPLODED VIEW



MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		
101	A3M421I720	CABINET,FRONT ASSY		
101A	701WPJC340	CABINET,FRONT		
101B	713WPAA048	GUIDE,REMOCON		
101C	713WPAA111	GLASS LED		
101D	735WPA0396	SPEAKER,HOLDER		
101E	735WPBA808	BUTTON,FRAME		
101F	8995034000	CORD CLIP UL CO.		
101G	725000A063	SHEET,PC		
102	A3M421I740	CABINET,BACK ASS'Y		
103	752WSAA006	PLATE,SHIELD		
104	752WSAA008	SHIELD,CASE		
105	752WSAA013	SHIELD,LID		
106	722575A004	SHEET,RATING		
107	735WPBA809	BUTTON,POWER		
108	741WUA0019	SPRING,EARTH		
109	800WQ0A029	FELT,SHEET	10x150 T=0.5	
110	800WQ00032	SHEET	18x165xT0.5	
201	8110630A04	SCREW,TAP TITE(P)	BRAZIER	3x10
202	8110630604	SCREW,TAP TITE(P)	BRAZIER	3x6
203	8107630804	SCREW,TAP TITE(S)	BRAZIER	3x8
204	8109I30804	SCREW,TAP TITE(B)	WH7	3x8
205	8109630802	SCREW,TAP TITE(B)	BRAZIER	3x8
206	8117540A64	SCREW,TAPPING(B0)	TRUSS	4x16
207	8121J50B54	SCREW,TAP TITE(P)	GW20	5x28
---	792UHAA042	PACKAGE,TOP		
---	792UHAA043	PACKAGE,BOTTOM		
---	793UCDB170	GIFT BOX		
---	J3M42101A	INSTRUCTION BOOK		
---	J3M42107A	QUICK SET-UP SHEET		
---	JB5XD200	POLYBAG,INSTRUCTION(RED CAUTION)		
---	A3M421I975	INSTRUCTION BOOK KIT		

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
RESISTORS			
⚠ R411	R3X28A151J	R.METAL OXIDE	150 OHM 2W
⚠ R418	R3X28B6R8J	R,METAL OXIDE	6.8 OHM 3W
⚠ R424	R3X181181J	R,METAL OXIDE	180 OHM 1W
⚠ R429	R635815R6J	R,FUSE	5.6 OHM 1W
⚠ R447	R635U2680J	R,FUSE	68 OHM 1/2W
⚠ R501	R002T2155J	RC	1.5M OHM 1/2W
⚠ R502	R3X181221J	R,METAL OXIDE	220 OHM 1W
⚠ R503	R63581R22J	R,FUSE	0.22 OHM 1W
⚠ R516	R3X181010J	R,METAL OXIDE	1 OHM 1W
⚠ R517	R002T4155J	RC	1.5M OHM 1/4W
⚠ R803	R3X181153J	R,METAL OXIDE	15K OHM 1W
⚠ R805	R3X181153J	R,METAL OXIDE	15K OHM 1W
⚠ R807	R3X181153J	R,METAL OXIDE	15K OHM 1W
CAPACITORS			
C418	E5EZF3222M	CE	2200 UF 25V
C437	P4J7F3394J	CMPP	0.39 UF 250V PMS
C443	P4N8FJ822H	CMPP	0.0082UF 1.25KV
⚠ C501	P2122B104M	CMP	0.1 UF 275V ECQUL
⚠ C502	P2122B224M	CMP	0.22 UF 275V ECQUL
C503	C0JBB0713K	CC	0.001 UF 2KV B
C504	C0JBB0713K	CC	0.001 UF 2KV B
⚠ C505	E52DHH820M	CE	82 UF 400V
⚠ C507	C03L0R713K	CC	0.001 UF 2KV R
C517	C03L0R713K	CC	0.001 UF 2KV R
C521	E62NFB101M	CE	100 UF 160V
⚠ C527	CD39B0MQ2K	CC	470 PF 250V
⚠ C528	CD39E0MH3M	CC	0.0022UF 250V
⚠ C532	CD39E0M13M	CC	0.001 UF 250V
C819	C0JBB0713K	CC	0.001 UF 2KV B
DIODES			
D001	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D101	0021721150	LED	SLR-342VCT32
D102	D97U05R11B	DIODE,ZENER	MTZJ5.1B T-77
D108	D1VT001330	DIODE,SILICON	1SS133T-77
D403	D2WT011E10	DIODE SILICON	11E1-EIC
D404	D2WTAU02A0	DIODE SILICON	AU02A-EIC
D405	D2WTAU02A0	DIODE SILICON	AU02A-EIC
D406	D2WT011E10	DIODE SILICON	11E1-EIC
D407	D2WT011E10	DIODE SILICON	11E1-EIC
D410	D2WTAU02A0	DIODE SILICON	AU02A-EIC
D414	D2WT011E10	DIODE SILICON	11E1-EIC
⚠ D501	D2WTRM11C0	DIODE SILICON	RM11C-EIC
⚠ D502	D2WTRM11C0	DIODE SILICON	RM11C-EIC
⚠ D503	D2WTRM11C0	DIODE SILICON	RM11C-EIC
⚠ D504	D2WTRM11C0	DIODE SILICON	RM11C-EIC
D505	D1VT001330	DIODE,SILICON	1SS133T-77
D507	D1VT001330	DIODE,SILICON	1SS133T-77
D508	D97U01801B	DIODE,ZENER	MTZJ18B T-77
D509	D2WT011E10	DIODE SILICON	11E1-EIC
D510	D2WXRU2AM0	DIODE SILICON	RU2AM-EIC
D511	D2WXN49370	DIODE SILICON	1N4937
D512	D2WXSB1400	DIODE SCHOTTKY	SB140-EIC
D513	D28T21DQN9	DIODE SCHOTTKY	21DQ09N-TA2B1
D514	D1VT001330	DIODE,SILICON	1SS133T-77
⚠ D515	D2WXSB1400	DIODE SCHOTTKY	SB140-EIC
D516	D28T21DQN9	DIODE SCHOTTKY	21DQ09N-TA2B1
D517	D2WT011E10	DIODE SILICON	11E1-EIC
D518	D1VT001330	DIODE,SILICON	1SS133T-77
D521	D1VT001330	DIODE,SILICON	1SS133T-77
D522	D97U01801B	DIODE,ZENER	MTZJ18B T-77
D523	D1VT001330	DIODE,SILICON	1SS133T-77
D524	D97U03R61B	DIODE,ZENER	MTZJ3.6B T-77
D525	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D528	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D601	D1VT001330	DIODE,SILICON	1SS133T-77
D602	D1VT001330	DIODE,SILICON	1SS133T-77
D603	D1VT001330	DIODE,SILICON	1SS133T-77
D604	D2WT011E10	DIODE SILICON	11E1-EIC
D606	D97U06R81B	DIODE,ZENER	MTZJ6.8B T-77
D607	D97U06R81B	DIODE,ZENER	MTZJ6.8B T-77
D608	D97U06R81B	DIODE,ZENER	MTZJ6.8B T-77
D609	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D709	D97U05R11B	DIODE,ZENER	MTZJ5.1B T-77
D807	D1VT001330	DIODE,SILICON	1SS133T-77
D808	D1VT001330	DIODE,SILICON	1SS133T-77
D809	D1VT001330	DIODE,SILICON	1SS133T-77

REF. NO.	PART NO.	DESCRIPTION	
ICS			
IC101	I5PD0F009A	IC	OECF009A
IC102	I9UF032310	IC	PST3231NR
IC199	A3M401M015	IC	S-24C04BFJ-TB
IC201	I0WDE246C0	IC	STV2246C
IC401	I0WTD81740	IC	TDA8174A
IC502	I1KA97806A	IC	KIA7806API
IC503	I1KA98R09A	IC	KIA78R09API
⚠ IC504	0002E00610	PHOTO COUPLER	LTV-817M-VB
IC1001	I01DP75110	IC	AN7511
TRANSISTORS			
Q103	T6YJ1037K0	TRANSISTOR,SILICON	2SA1037AKT146R,S
Q201	T8AA03881S	TRANSISTOR SILICON	KTC3881S-RTK
Q202	T8YJ2412K0	TRANSISTOR SILICON	2SC2412KT146 R,S
Q204	T8YJ2412K0	TRANSISTOR SILICON	2SC2412KT146 R,S
⚠ Q401	TD3Q021400	TRANSISTOR SILICON	TT2140LS-YBC11
Q402	TC5T01627Y	TRANSISTOR SILICON	2SC1627_Y(TPE2)
Q403	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
⚠ Q501	T410K26470	FET	2SK2647-01MR
Q502	TCAT032034	TRANSISTOR, SILICON	KTC3203_Y-AT
Q506	T6YJ1037K0	TRANSISTOR,SILICON	2SA1037AKT146R,S
Q507	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q510	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q511	TAAT01281Y	TRANSISTOR SILICON	KTA1281_Y
Q605	T8YJ2412K0	TRANSISTOR SILICON	2SC2412KT146 R,S
Q615	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q616	TPAAB05001	COMPOUND TRANSISTOR	KRA102SRTK
Q801	TCAT032070	TRANSISTOR SILICON	KTC3207-AT
Q802	TCAT032070	TRANSISTOR SILICON	KTC3207-AT
Q803	TCAT032070	TRANSISTOR SILICON	KTC3207-AT
COILS &TRANSFORMERS			
L001	02167F100J	COIL	10 UH
L101	02167F100J	COIL	10 UH
L102	02167F100J	COIL	10 UH
L103	0216A6100K	COIL	10 UH
L202	02167F3R3J	COIL	3.3 UH
L203	0216A61R5K	COIL	1.5 UH
L204	0216A6180K	COIL	18 UH
L206	0216A6R27M	COIL	0.27 UH
L207	033700005R	COIL,VIDEO IFT	3700005
L401	021679472K	COIL	4.7 MH
⚠ L501	029T000094	COIL,LINE FILTER	0R7A223F24Y
L502	02AHB9A972	CORE,FERRITE	W5T29X7.5X19
⚠ L503	028R140018	COIL,DEGAUSS	8R140018
L601	02167F100J	COIL	10 UH
L702	0216A6100K	COIL	10 UH
L703	0216A6100K	COIL	10 UH
T401	045009003J	TRANS,HORIZONTAL DRIVE	ETH09K14BZ
⚠ T501	048129110H	TRANSFORMER,SWITCHING	8129110H
JACKS			
J701	063G100042	SOCKET,21PIN	0350_9982_05
J801	066F120018	SOCKET,CATHODE RAY TUBE	ISMS01S
J1001	060J121014	JACK,RCA,3.5	MSJ-035-12A_PC
SWITCHES			
SW101	0504101T34	SWITCH,TACT	EVQ21505R
SW102	0504101T34	SWITCH,TACT	EVQ21505R
SW103	0504101T34	SWITCH,TACT	EVQ21505R
SW104	0504101T34	SWITCH,TACT	EVQ21505R
⚠ SW501	0530105019	SWITCH	ESB92S22B
VARIABLE RESISTORS			
VR401	V1163H3BTC	VOLUME,SEMI FIXED	EVNCYAA03BE3
VR420	V1163Q2BTC	VOLUME,SEMI FIXED	EVNCYAA03BQ2
VR501	V116313BTC	VOLUME,SEMI FIXED	EVNCYAA03B13
P.C.BOARD ASSEMBLIES			
PCB010	A3M421I010K	PCB ASS'Y	TMB557A
PCB110	A3M420I110K	PCB ASS'Y	TCB416A
MISCELLANEOUS			
ANT001	125C500017	ANTENNA,LOOP	TU-33AP
B501	024HT03563	CORE,BEADS	W4BRH3.5X6X1.0X2
B504	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B1001	024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B1002	024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
BT001	1412004013	BATTERY,MANGAN	R03(AB)2PXGPI
BT002	1412004013	BATTERY,MANGAN	R03(AB)2PXGPI
⚠ CD501	1206444801	CORD AC BUSH	6444801
CD801	1278140030	BRAIDED WIRE	SM1573-001
CD802	WDL6028038	FLAT CABLE	AWG26 6C BLACK 280MM
CD803	WBL6026038	FLAT CABLE	AWG26 4C BLACK 260MM

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
MISCELLANEOUS			
CF201	1012T6R014	FILTER,CERAMIC TRAP	TPSRA6M00B00-A0
CF202	102E239R5B	FILTER SAW	J1951M
CF204	1012T04101	FILTER,CERAMIC TRAP	MKT41.5MA110P
CP001	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP101	069X160379	CONNECTOR PCB SIDE	06JQ-ST
CP401	069S450089	CONNECTOR PCB SIDE	A1561WV2-A5P
CP502	069S420110	CONNECTOR PCB SIDE	A1561WV2-2P
CP801	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP1001	069W120019	CONNECTOR PCB SIDE	TID-X02P-B2
CP802A	067U006049	WIRE HOLDER	B2013H02-6P
CP802B	067U006049	WIRE HOLDER	B2013H02-6P
CP803A	067U004029	WIRE HOLDER	B2013H02-4P
CP803B	067U004029	WIRE HOLDER	B2013H02-4P
EL002	124120301A	EYE LET	XRY20X30BD
⚠ F501	080NT04004	FUSE	50T040H
⚠ FB401	043214039F	TRANSFORMER,FLYBACK	FNI-14B002
FH501	06710T0006	HOLDER,FUSE	EYF-52BC
FH502	06710T0006	HOLDER,FUSE	EYF-52BC
OS101	0773071001	REMOTE RECEIVER	RPM7138-H5
SP1001	070C132019	SPEAKER	SA08A05BWC
⚠ TH501	D8E080B100	DEGAUSS ELEMENT	B59104-T80-B10
TM101	076N0GE030	TRANSMITTER	RC-GE030
TU001	0144R07025	TUNER,UHF	UE25-B58D
⚠ V801	098Y1404B9	CRT W/DY	A34JXV70X53N45
X101	100CT4R013	CRYSTAL	HC-49/U-S
X601	100CT4R408	CRYSTAL	HC-49/U

RESISTOR

RC.................. CARBON RESISTOR

CAPACITORS

CC.................. CERAMIC CAPACITOR
CE.................. ALUMI ELECTROLYTIC CAPACITOR
CP.................. POLYESTER CAPACITOR
CPP.................. POLYPROPYLENE CAPACITOR
CPL.................. PLASTIC CAPACITOR
CMP.................. METAL POLYESTER CAPACITOR
CMPL................ METAL PLASTIC CAPACITOR
CMPP................ METAL POLYPROPYLENE CAPACITOR

SPEC.NO.	M3M4-21I
O/R NO.	U353551

SERVICING NOTICES ON CHECKING

1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.
Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a ⚠ mark, the designated parts must be used.

4. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

5. TAKE CARE TO DEAL WITH THE CATHODE-RAY TUBE

In the condition that an explosion-proof cathode-ray tube is set in this equipment, safety is secured against implosion. However, when removing it or serving from backward, it is dangerous to give a shock. Take enough care to deal with it.

6. AVOID AN X-RAY

Safety is secured against an X-ray by considering about the cathode-ray tube and the high voltage peripheral circuit, etc.
Therefore, when repairing the high voltage peripheral circuit, use the designated parts and make sure not modify the circuit.
Repairing except indicates causes rising of high voltage, and it emits an X-ray from the cathode-ray tube.

7. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

(INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the eternal exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]

If you have not the 500V insulation resistance meter, use a Tester.

[Note 2]

External exposure metal: Antenna terminal
Earphone jack

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

1. MODEL NUMBER and VERSION LETTER
   The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.
2. PART NO. and DESCRIPTION
   You can find it in your SERVICE MANUAL.

IMPORTANT

Inferior silicon grease can damage IC's and transistors.
When replacing an IC's or transistors, use only specified silicon grease (YG6260M).
Remove all old silicon before applying new silicon.

CONTENTS

GENERAL SPECIFICATIONS

No.	Item				Specification
G-1	**TV System**	CRT		CRT Size / Visual Size	14 inch / 335.4mmV
				CRT Type	Normal
				Deflection	90 degree
				Magnetic Field BV/BH	+0.45G/0.18G
		Color System			PAL
		Speaker			1Speaker
				Position	Bottom
				Size	3 Inch
				Impedance	8 ohm
		Sound Output		MAX	1.0 W
				10%(Typical)	0.8 W
		PAL60Hz			Yes
G-2	**Tuning System**	Broadcasting System			U.K. System I
		Tuner and Receive CH		System	1Tuner
				Destination	UK
				Tuning System	F-Synth
				Input Impedance	VHF/UHF 75 ohm
				CH Coverage	21 - 69
		Intermediate Frequency		Picture(FP)	39.5MHz
				Sound(FS)	33.5MHz
				FP-FS	6.0MHz
		Preset CH			80
		Stereo/Dual TV Sound			No
		Tuner Sound Muting			Yes
G-3	**Power**	Power Source		AC	230V AC 50Hz
				DC	
		Power Consumption		at AC	44 W at AC 230 V 50 Hz
				Stand by (at AC)	7 W at AC 230 V 50 Hz
				Per Year	-- kWh/Year
		Protector		Power Fuse	Yes
G-4	**Regulation**			Safety	CE
				Radiation	CE
				X-Radiation	-
G-5	**Temperature**			Operation	+5ºC ~ +40ºC
				Storage	-20ºC ~ +60ºC
G-6	**Operating Humidity**				Less than 80% RH
G-7	**On Screen Display**	Menu			Yes
			Menu Type		Character
			Picture		Yes
				Contrast	Yes
				Brightness	Yes
				Color	Yes
				Tint	No
				Sharpness	Yes
			Audio		No
				Bass	No
				Treble	No
				Balance	No
				BBE On/Off	No
				Stable Sound On/Off	No
			CH Tuning		Yes
				Manual	Yes
				Auto	Yes
				CH Allocation	Yes
			Language		Yes
			Clock Set		No
			On/Off Timer Set		No
			Pin Code Registration		No
			Nicam Auto Off		No
			Colour System		No
			Sound System		No
			AV2 Output Source		No
			HELPLINE		No
			Control Level		Yes
				Volume	Yes
				Brightness	Yes
				Contrast	Yes
				Color	Yes
				Tint (NTSC Only)	No
				Sharpness	Yes
				Tuning	Yes
				Bass	No
				Treble	No
				Balance	No
				Back Light	No

GENERAL SPECIFICATIONS

			Nicam ST	No
			Tone 1/2	No
			Pin Code	No
			AV	Yes
			Skip	Yes
			Channel	Yes
			Hotel Lock	No
			Sleep Timer	Yes
			Sound Mute	Yes
G-8	**OSD Language**			English French Spanish German Italian
G-9	**Clock and Timer**	Sleep Timer	Max Time	120 Min
			Step	10 Min
		On/Off Timer	Program(On Timer / Off Timer)	No
		Wake Up Timer		No
		Timer Back-up (at Power Off Mode)	more than	-- Min Sec
G-10	**Remote Control**	Unit		RC-GE
		Glow in Dark Remocon		No
		Format		NEC
		Custom Code		80-63 h
		Power Source	Voltage(D.C)	3V
			UM size x pcs	UM-4 x 2 pcs
		Total Keys		31 Keys
		Keys	Power(Stand By)	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0 / AV	Yes
			CH Up	No
			CH Down	No
			Volume Up / +	Yes
			Volume Down / -	Yes
			Quick View	No
			Sleep	Yes
			Info(CH Call)	Yes
			Normal	No
			Menu	Yes
			Enter	Yes
			Mute	Yes
			Fine Tuning +	No
			Fine Tuning -	No
			Tone 1/2	No
		T'TEXT Keys	TEXT / MIX / TV	Yes
			CH Up / Page Up	Yes
			CH Down / Page Down	Yes
			Red	Yes
			Green	Yes
			Yellow / Fine Tuning -	Yes
			Cyan / Fine Tuning +	Yes
			F/T/B(Expand) / Normal	Yes
			Reveal / Skip	Yes
			Display Cancel	Yes
			Reset	Yes
			Reset / Tone 1/2	No
			Hold / Status	Yes
			Sub Page / Quick View	Yes
G-11	**Features**	Auto Degauss		Yes
		Auto Shut Off		Yes
		Canal+		No
		CATV		No
		Anti-theft		No
		Memory(Last CH)		Yes
		Memory(Last Volume)		Yes
		BBE		No
		Auto Search		Yes
		CH Allocation		Yes
		Fine Tuning		Yes
		Channel Lock		No
		Just Clock Function		No
		Game Position		No
		CH Label		No

GENERAL SPECIFICATIONS

		VM Circuit			No
		Full OSD			No
		Unitext			Yes
		Fastext			No
		Top Text			No
		Premiere			No
		Comb Filter			No ___ Lines
		Auto CH Memory			Yes
		Auto Set Up			No
		Stable Sound			No
		FBT Leak Test Protect			No
		Hotel Lock			No
		Power ON Memory			Yes
G-12	**Accessories**	Owner's Manual		Language w/Guarantee Card	English No
		Remote Control Unit			Yes
		Rod Antenna		Poles Terminal	No Pole type
		Loop Antenna		Terminal	Yes Din Type
		U/V Mixer			No
		DC Car Cord (Center+)			No
		Guarantee Card			No
		Warning Sheet			No
		Circuit Diagram			No
		Antenna Change Plug			No
		Service Facility List			No
		Important Safeguard			No
		Dew/AHC Caution Sheet			No
		AC Plug Adapter			No
		Quick Set-up Sheet			Yes
		Battery		UM size x pcs OEM Brand	Yes UM-4 x 2 pcs No
		AC Cord			No
		AV Cord (2Pin-1Pin)			No
		Registration Card			No
		PTB Sheet			No
		300 ohm to 75 ohm Antenna Adapter			No
		Insurance Plan Leaflet			No
G-13	**Interface**	Switch	Front	Power	No
				System Select	No
				Main Power SW	Yes
				Sub Power	No
				Channel Up	Yes
				Channel Down	Yes
				Volume Up	Yes
				Volume Down	Yes
			Rear	AC/DC	No
				TV/CATV Selector	No
				Degauss	No
				Main Power SW	No
		Indicator		Power	No
				Stand-by	Yes
				On Timer	No
		Terminals	Front	Video Input	No
				Audio Input	No
				Other Terminal	Ear Phone
			Rear	Video Input(Rear1)	No
				Video Input(Rear2)	No
				Audio Input(Rear1)	No
				Audio Input(Rear2)	No
				Video Output	No
				Audio Output	No
				Euro Scart(21Pin)	Yes (x1)
				Component Input	No
				Diversity	No
				Ext Speaker	No
				DC Jack 12V(Center +)	No
				VHF/UHF Antenna Input	Din Type
				AC Outlet	No
G-14	**Set Size**			Approx. W x D x H (mm)	362 x 360 x 320.5
G-15	**Weight**			Net (Approx.) Gross (Approx.)	9.5 kg (--- lbs) 11.5kg (---lbs)
G-16	**Carton**		Master Carton		No

GENERAL SPECIFICATIONS

			Content	---- Sets
			Material	-- /--
			Dimensions W x D x H(mm)	-- x -- x --
			Description of Origin	No
		Gift Box		Yes
			Material	Double/Full Color
			Dimensions W x D x H(mm)	440 x 408 x 380
			Design	As per Buyer's
			Description of Origin	No
		Drop Test		Natural Dropping At 1 Corner / 3 Edges / 6 Surfaces
			Height (cm)	62
		Container Stuffing		866 Sets/40' container
G-17	**Material**	Cabinet	Cabinet Front	PS 94V0 DECABROM
			Cabinet Rear	PS 94V0 DECABROM
		PCB	Non-Halogen Demand	No
			Eyelet Demand	No
G-18	**Environment**	Pb Free	Lead-free Solder	No
			Other	No
		Cd Free		No

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF ANODE CAP

Read the following **NOTED** items before starting work.

* After turning the power off there might still be a potential voltage that is very dangerous. When removing the Anode Cap, make sure to discharge the Anode Cap's potential voltage.
* Do not use pliers to loosen or tighten the Anode Cap terminal, this may cause the spring to be damaged.

REMOVAL

1. Follow the steps as follows to discharge the Anode Cap. **(Refer to Fig. 1-1.)**
   Connect one end of an Alligator Clip to the metal part of a flat-blade screwdriver and the other end to ground.
   While holding the plastic part of the insulated Screwdriver, touch the support of the Anode with the tip of the Screwdriver.
   A cracking noise will be heard as the voltage is discharged.

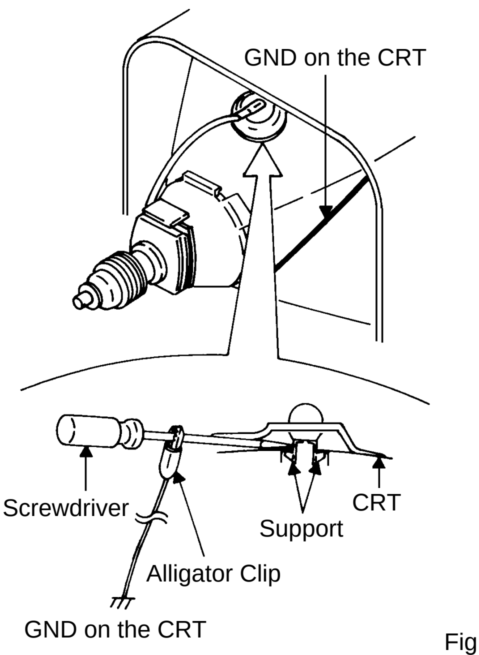


Fig. 1-1

2. Flip up the sides of the Rubber Cap in the direction of the arrow and remove one side of the support. **(Refer to Fig. 1-2.)**

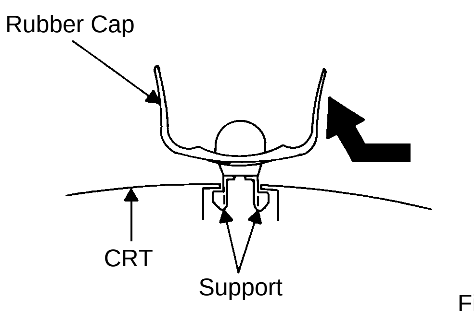


Fig. 1-2

3. After one side is removed, pull in the opposite direction to remove the other.

NOTE

Take care not to damage the Rubber Cap.

INSTALLATION

1. Clean the spot where the cap was located with a small amount of alcohol. **(Refer to Fig. 1-3.)**

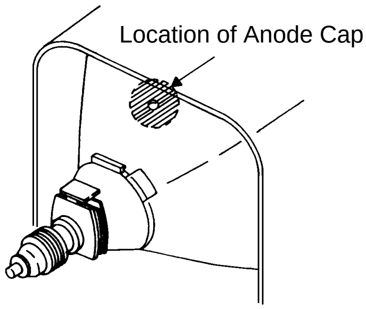


Fig. 1-3

NOTE

Confirm that there is no dirt, dust, etc. at the spot where the cap was located.

2. Arrange the wire of the Anode Cap and make sure the wire is not twisted.
3. Turn over the Rubber Cap. **(Refer to Fig. 1-4.)**

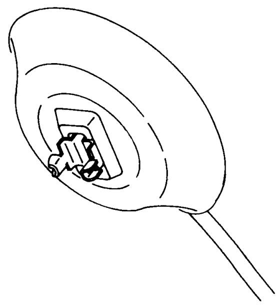


Fig. 1-4

4. Insert one end of the Anode Support into the anode button, then the other as shown in **Fig. 1-5.**

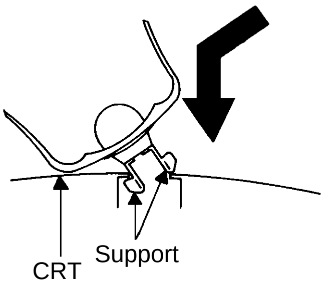


Fig. 1-5

5. Confirm that the Support is securely connected.
6. Put on the Rubber Cap without moving any parts.

DISASSEMBLY INSTRUCTIONS

2. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put the Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. **(Refer to Fig. 2-1.)**

   NOTE

   Masking is carried out on all the parts located within 10 mm distance from IC leads.

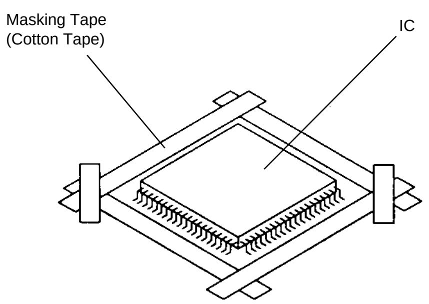


Fig. 2-1

2. Heat the IC leads using a blower type IC desoldering machine. **(Refer to Fig. 2-2.)**

   NOTE

   Do not add the rotating and the back and forth directions force on the IC, until IC can move back and forth easily after desoldering the IC leads completely.

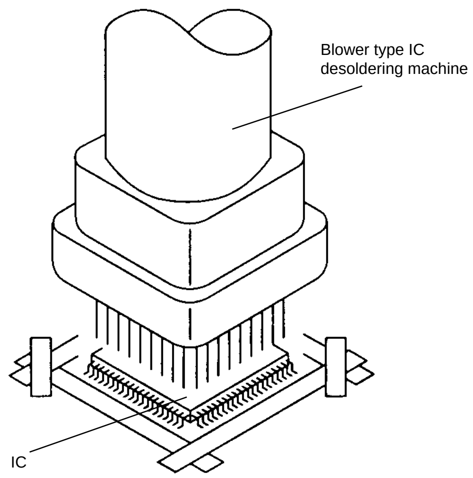


Fig. 2-2

3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using a tweezers and remove the IC by moving with the IC desoldering machine. **(Refer to Fig. 2-3.)**

   NOTE

   Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.

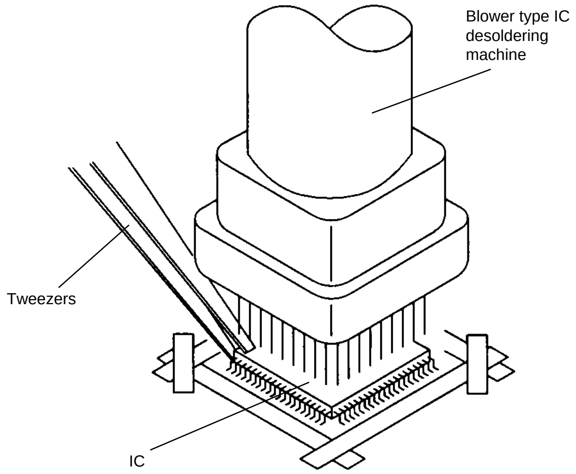


Fig. 2-3

4. Peel off the Masking Tape.

5. Absorb the solder left on the pattern using the Braided Shield Wire. **(Refer to Fig. 2-4.)**

   NOTE

   Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.

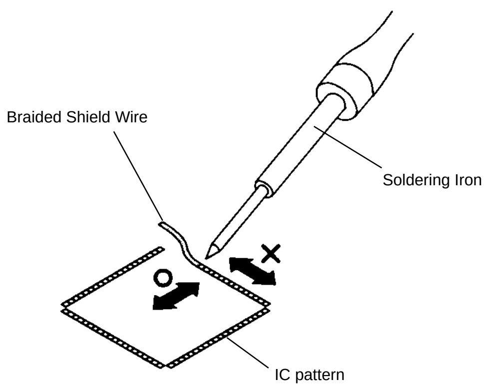


Fig. 2-4

DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. **(Refer to Fig. 2-5.)**

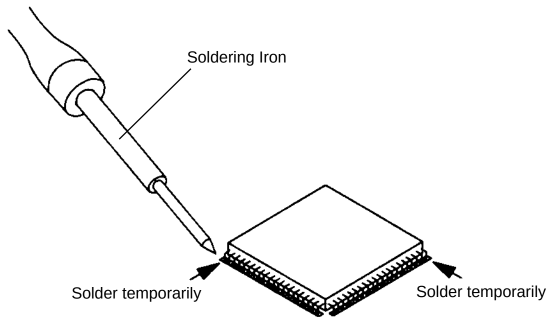


Fig. 2-5

2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 2-6.)**

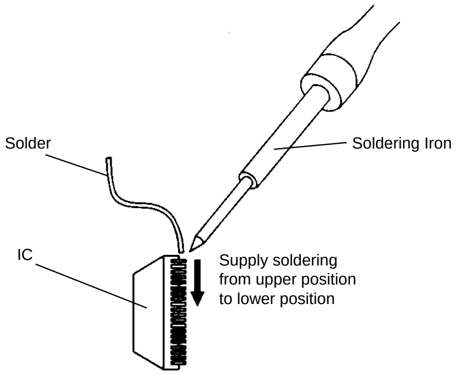


Fig. 2-6

3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 2-7.)**

   NOTE

   Do not absorb the solder to excess.

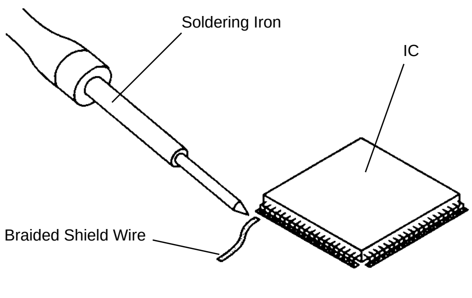


Fig. 2-7

4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. **(Refer to Fig. 2-8.)**

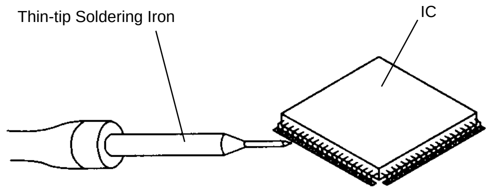


Fig. 2-8

5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass.
   Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

   NOTE

   When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, be always sure to replace the IC in this case.

SERVICE MODE LIST

This unit provided with the following SERVICE MODES so you can repair, examine and adjust easily.
To enter the Service Mode, press both set key and remote control key for more than 2 seconds.

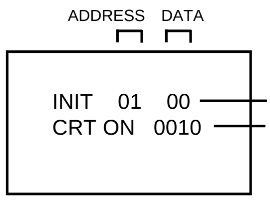
Set Key	Remocon Key	Operations
VOL. (-) MIN	0	Reset the user setting items (PICTURE, VOLUME and LANGUAGE) to the initial state for delivery.
VOL. (-) MIN	1	Initialization of the factory. NOTE: Do not use this for the normal servicing.
VOL. (-) MIN	6	POWER ON total hours is displayed on the screen. Refer to the "CONFIRMATION OF HOURS USED". Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
VOL. (-) MIN	8	Writing of EEPROM initial data. NOTE: Do not use this for the normal servicing.
VOL. (-) MIN	9	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).

CONFIRMATION OF HOURS USED

POWER ON total hours can be checked on the screen. Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".

1. Set the VOLUME to minimum.
2. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 second.
3. After the confirmation of using hours, turn off the power.



Initial setting content of MEMORY IC.
POWER ON total hours.
= (16 x 16 x 16 x thousands digit value)
+ (16 x 16 x hundreds digit value)
+ (16 x tens digit value)
+ (ones digit value)

FIG. 1

WHEN REPLACING EEPROM (MEMORY) IC

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to TABLE 1.

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
00	---	00	00	00	00	19	60	40	00	41	00	01	03	00	00	00
10	10	00	80	80	80	00	00	---	---	---	---	---	---	---	---	---

Table 1

1. Enter DATA SET mode by setting VOLUME to minimum.
2. While holding down VOLUME button on front cabinet, press key 6 on remote control for more than 2 seconds.

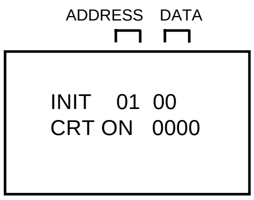


Fig. 1

3. ADDRESS is now selected and should "blink". Using the VOL. +/- button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
4. Press ENTER to select DATA. When DATA is selected, it will "blink".
5. Again, step through the DATA using VOL. +/- button until required DATA value has been selected.
6. Pressing ENTER will take you back to ADDRESS for further selection if necessary.
7. Repeat steps 3 to 6 until all data has been checked.
8. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

After the data input, set to the initializing of shipping.

9. Turn POWER on.
10. While holding down VOLUME button on front cabinet, press key 1 on remote control for more than 2 seconds.
11. After the finishing of the initializing of shipping, the unit will turn off automatically.

The unit will now have the correct DATA for the new MEMORY IC.

ELECTRICAL ADJUSTMENTS

1. BEFORE MAKING ELECTRICAL ADJUSTMENTS

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- Before removing the anode cap, discharge electricity because it contains high voltage.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor for a heat sink, apply the silicon grease **(YG6260M)** on the contact section of the heat sink. Befor applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

Prepare the following measurement tools for electrical adjustments.

1. Oscilloscope
2. Digital Voltmeter
3. Pattern Generator

On-Screen Display Adjustment

1. In the condition of NO indication on the screen. Press the VOL. DOWN button on the set and the Channel button **(9)** on the remote control for more than 2 seconds to appear the adjustment mode on the screen as shown in **Fig. 1-1**.

TV

35 H. POSI OSD 128

Fig. 1-1

2. Use the Channel UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2**.
3. Press the MENU button on the remote control to end the adjustments.

NO.	FUNCTION	NO.	FUNCTION
00	CUT OFF	20	TINT
01	RF AGC	21	SHARP
02	AGC GAIN	22	CONT CENT
03	R DRIVE	23	CONT MAX
04	R CUT OFF	24	CONT MIN
05	G DRIVE	25	COLOR CENT
06	G CUT OFF	26	COLOR MAX
07	B DRIVE	27	COLOR MIN
08	H POSI 50	28	M R CUT OFF
09	V POSI 50	29	M G CUT OFF
10	V POSI 60	30	M B CUT OFF
11	V SIZE 50	31	CVBS OUT
12	V SIZE 60	32	APR THR
13	VCO COASE	33	BELL
14	VCO FINE	34	BANDPASS
15	-	35	H POSI OSD
16	-	36	V POSI OSD
17	BRIGHT CENT	37	H POSI TXT
18	BRIGHT MAX	38	V POSI TXT
19	BRIGHT MIN	39	H POSI 60

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: AGC VOLTAGE

1. Place the set with Aging Test for more than 15 minutes.
2. Receive the UHF (63 ± 1dB).
3. Connect the digital voltmeter between the **TP002** and **the (GND) of TU001**.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(01)** on the remote control to select "RF AGC".
5. Press the VOL. UP/DOWN button on the remote control until the digital voltmeter is 2.10 ± 0.05V.

2-2: CUT OFF

1. Place the set with Aging Test for more than 15 minutes.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(00)** on the remote control to select "CUT OFF".
4. Adjust the **Screen Volume** until a dim raster is obtained.

2-3: WHITE BALANCE

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set with Aging Test for more than 10 minutes.
2. Receive the white 100% signal from the Pattern Generator.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(04)** on the remote control to select "R CUT OFF".
5. Using the VOL. UP/DOWN button on the remote control, adjust the R CUT OFF.
6. Press the CH. UP/DOWN button on the remote control to select the "R DRIVE", "G DRIVE", "G CUT OFF" or "B DRIVE".
7. Using the VOL. UP/DOWN button on the remote control, adjust the R DRIVE, G DRIVE, G CUT OFF or B DRIVE.
8. Perform the above adjustments 6 and 7 until the white color is looked like a white.

2-4: FOCUS

1. Receive the monoscope pattern.
2. Turn the Focus Volume fully counterclockwise once.
3. Adjust the **Focus Volume** until picture is distinct.

2-5: CONSTANT VOLTAGE

1. Place the set with Aging Test for more than 15 minutes.
2. Using the remote control, set the brightness and contrast to normal position.
3. Connect the digital voltmeter to **TP501**.
4. Set condition is AV MODE without signal.
5. Adjust the **VR501** until the digital voltmeter is 135 ± 0.5V.

2-6: VERTICAL LINEARITY

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Adjust the **VR420** until the SHIFT quantity of the OVER SCAN on upside and downside becomes minimum.

ELECTRICAL ADJUSTMENTS

2-7: HORIZONTAL POSITION

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(08)** on the remote control to select "H POSI(50)".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes minimum.
5. Receive the monoscope pattern of NTSC.
6. Using the remote control, set the brightness and contrast to normal position.
7. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(39)** on the remote control to select "H POSI(60)".
8. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes minimum.

2-8: VERTICAL SIZE

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(11)** on the remote control to select "V SIZE(50)".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes 8 ± 3%.
5. Receive the monoscope pattern of NTSC.
6. Using the remote control, set the brightness and contrast to normal position.
7. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(12)** on the remote control to select "V SIZE(60)".
8. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes 8 ± 3%.

2-9: BRIGHT CENT

1. Place the set with Aging Test for more than 15 minutes.
2. Receive the monoscope pattern. (RF Input)
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(17)** on the remote control to select "BRIGHT CENT".
5. Press the VOL. UP/DOWN button on the remote control until the white 25% is starting to be visible.
6. Receive the monoscope pattern. (Audio Video Input)
7. Press the AV button on the remote control to set to the AV mode. Then perform the above adjustments 3~5.

2-10: CONT CENT

1. Place the set with Aging Test for more than 15 minutes.
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(22)** on the remote control to
3. select "CONT CENT".
4. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "30".
5. Press the AV button on the remote control to set the AV mode. Then perform the above adjustments 1, 2.

2-11: COLOR CENT

1. Receive the color bar pattern. (RF Input)
2. Connect the oscilloscope to **TP023**.
3. Using the remote control, set the brightness, contrast and color to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(25)** on the remote control to select "COLOR CENT".
5. Adjust the VOLTS RANGE VARIABLE knob of the oscilloscope until the range between white 100% and 0% is set to 5 scales on the screen of the oscilloscope.
6. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 85 ± 10% for the white level. **(Refer to Fig. 2-2)**
7. Receive the color bar pattern. (Audio Video Input)
8. Press the AV button on the remote control to set the AV mode. Then perform the above adjustments 2~6.

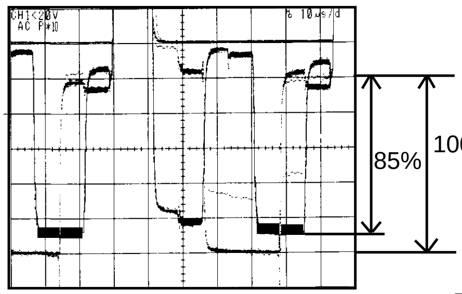


Fig. 2-2

2-12: VCO COASE/VCO FINE

1. Connect the oscillator (39.5MHz) to between the **TP003** and **the (GND) of TU001**.
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(13)** on the remote control to select "VCO COASE".
3. Press the VOL. UP/DOWN button on the remote control until the "+" appear on the screen.
4. Press the CH UP button once to set to "VCO FINE" mode.
5. Press the VOL. UP/DOWN button on the remote control to select the 4 step down point from the upper limit on the "+".
   (Example: In case of the "+" point 30~41, select 37.)

2-13: VERTICAL POSITION

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(09)** on the remote control to select "V POSI(50)".
4. Check if the step No. V. POSI is "08".
5. Adjust the **VR401** until the horizontal line becomes fit to notch of the shadow mask.

ELECTRICAL ADJUSTMENTS

2-14 : Confirmation of Fixed Value (Step No.)

Please check if the fixed values of the each adjustment items are set correctly referring below.

NO.	FUNCTION	RF	AV
02	AGC GAIN	00	---
04	R CUTOFF	00	---
06	G CUTOFF	00	---
07	B DRIVE	31	---
10	V POSI 50/60	08	---
18	BRIGHT MAX	37	37
19	BRIGHT MIN	10	10
20	TINT	32	32
21	SHARP	04	04
23	CONT MAX	50	50
24	CONT MIN	10	10
26	COLOR MAX	39	39
27	COLOR MIN	14	14
30	MB CUTPOFF	80	---
31	CVBS OUT	16	---
32	APR THR	04	---
33	BELL	10	---
34	BANDPASS	06	---
35	H POSI OSD	128	---
36	V POSI OSD	50	---
37	H POSI TXT	122	---
38	V POSI TXT	58	---

ELECTRICAL ADJUSTMENTS

3. PURITY AND CONVERGENCE ADJUSTMENTS

NOTE

1. Turn the unit on and let it warm up for at least 30 minutes before performing the following adjustments.
2. Place the CRT surface facing east or west to reduce the terrestrial magnetism.
3. Turn ON the unit and demagnetize with a Degauss Coil.

3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)

1. Tighten the screw for the magnet. Refer to the adjusted CRT for the position. **(Refer to Fig. 3-1)**
   If the deflection yoke and magnet are in one body, untighten the screw for the body.
2. Receive the green raster pattern from the color bar generator.
3. Slide the deflection yoke until it touches the funnel side of the CRT.
4. Adjust center of screen to green, with red and blue on the sides, using the pair of purity magnets.
5. Switch the color bar generator from the green raster pattern to the crosshatch pattern.
6. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
7. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.
8. Adjust the crosshatch pattern to change to white by repeating steps 6 and 7.

3-2: PURITY

NOTE

Adjust after performing adjustments in section 3-1.

1. Receive the green raster pattern from color bar generator.
2. Adjust the pair of purity magnets to center the color on the screen.
   Adjust the pair of purity magnets so the color at the ends are equally wide.
3. Move the deflection yoke backward (to neck side) slowly, and stop it at the position when the whole screen is green.
4. Confirm red and blue colors.
5. Adjust the slant of the deflection yoke while watching the screen, then tighten the fixing screw.

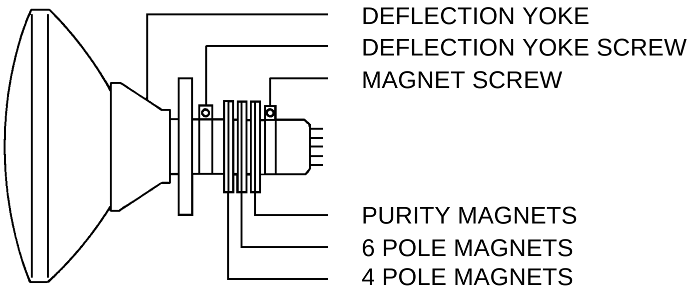


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

1. Receive the crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-3.

1. Adjust the differences around the screen by moving the deflection yoke upward/downward and right/left. **(Refer to Fig. 3-2-a)**
2. Insert three wedges between the deflection yoke and CRT funnel to fix the deflection yoke. **(Refer to Fig. 3-2-b)**

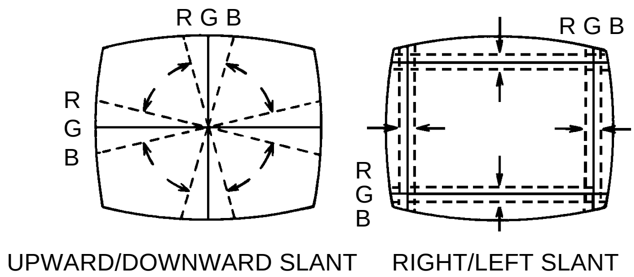
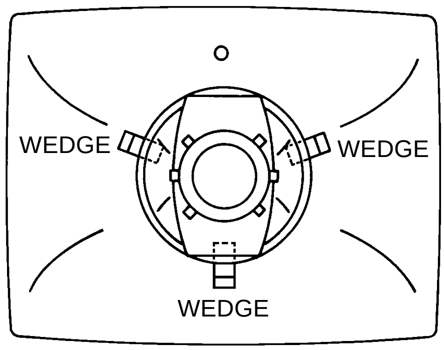


Fig. 3-2-a

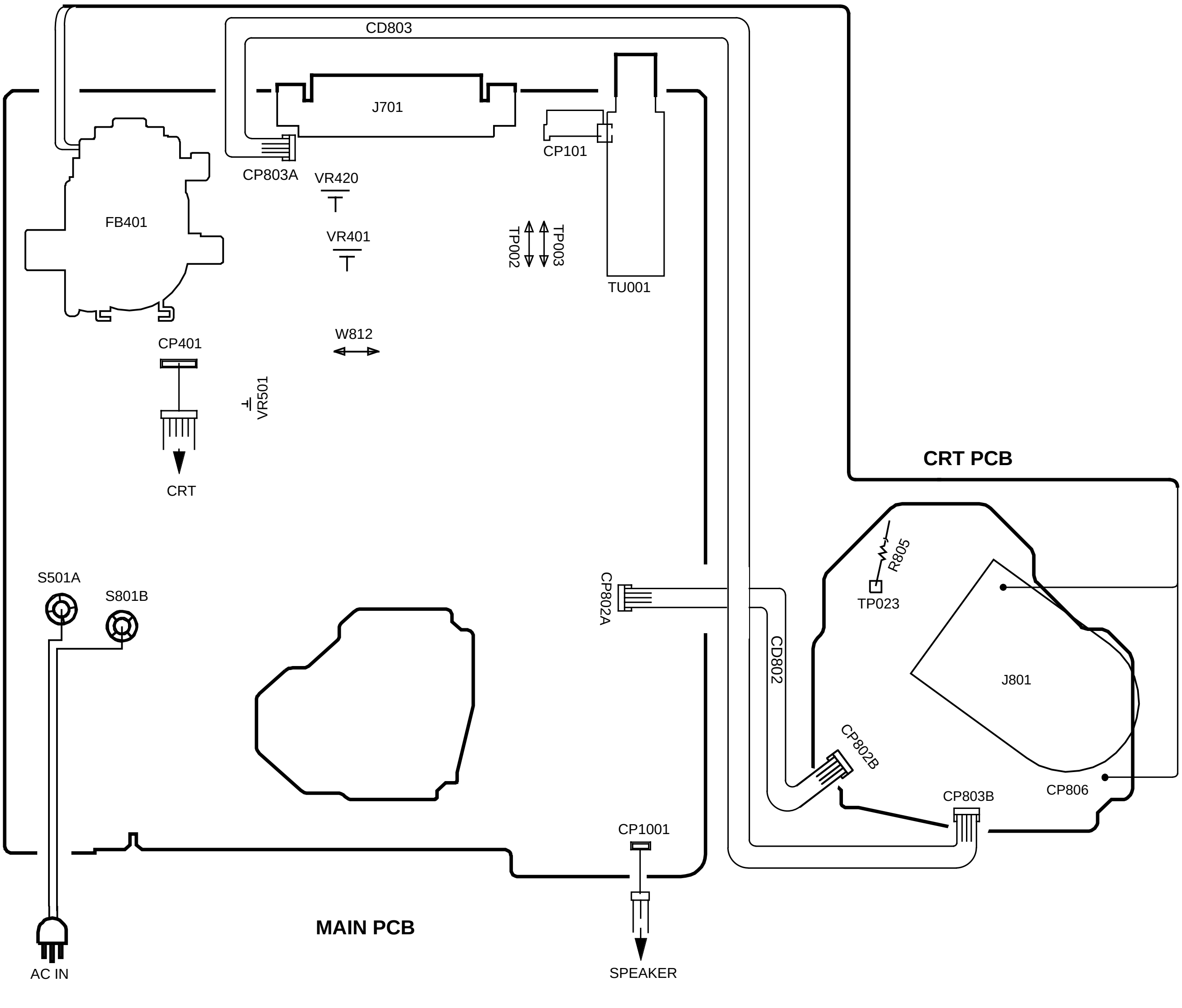


WEDGE POSITION

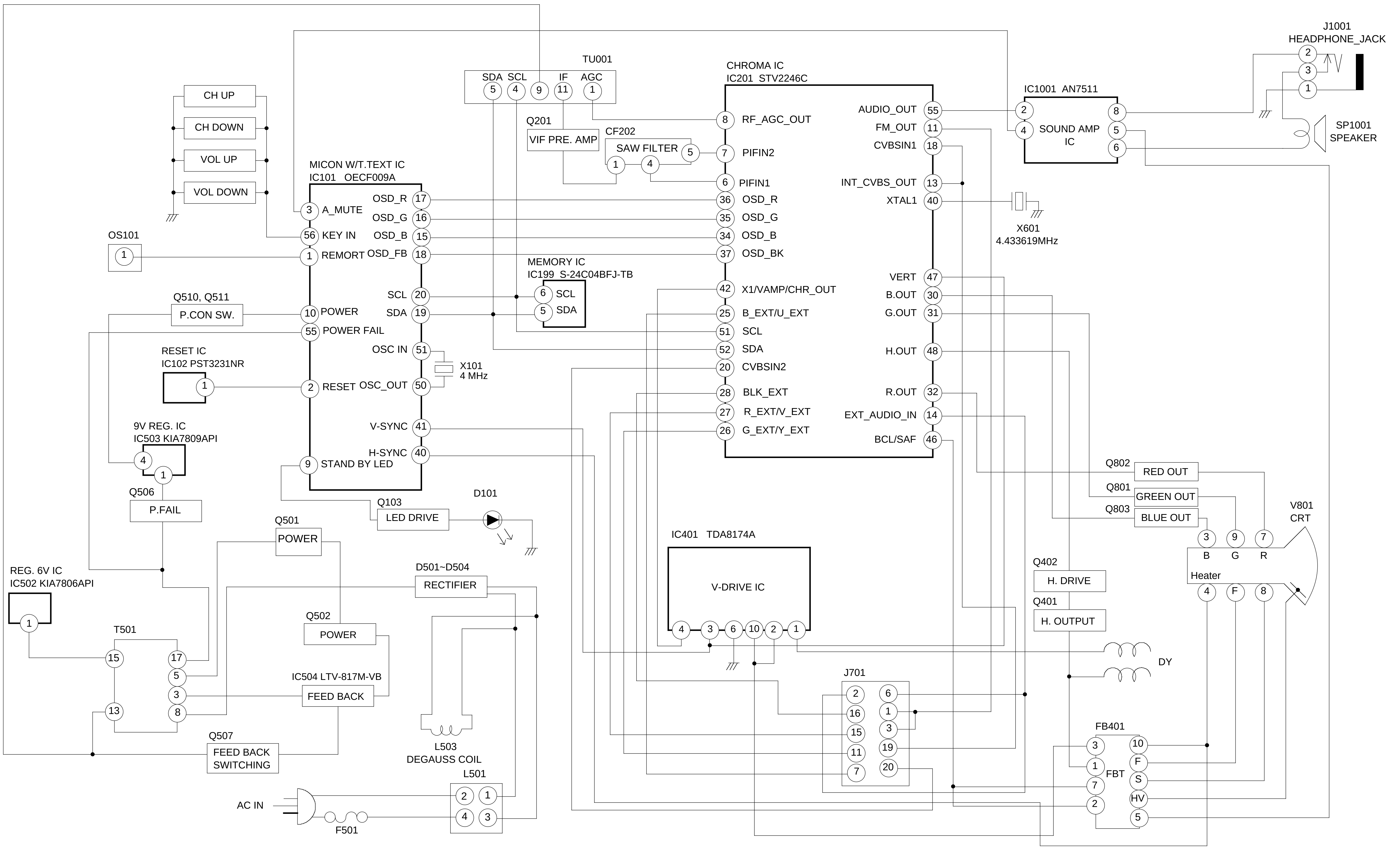
Fig. 3-2-b

ELECTRICAL ADJUSTMENTS

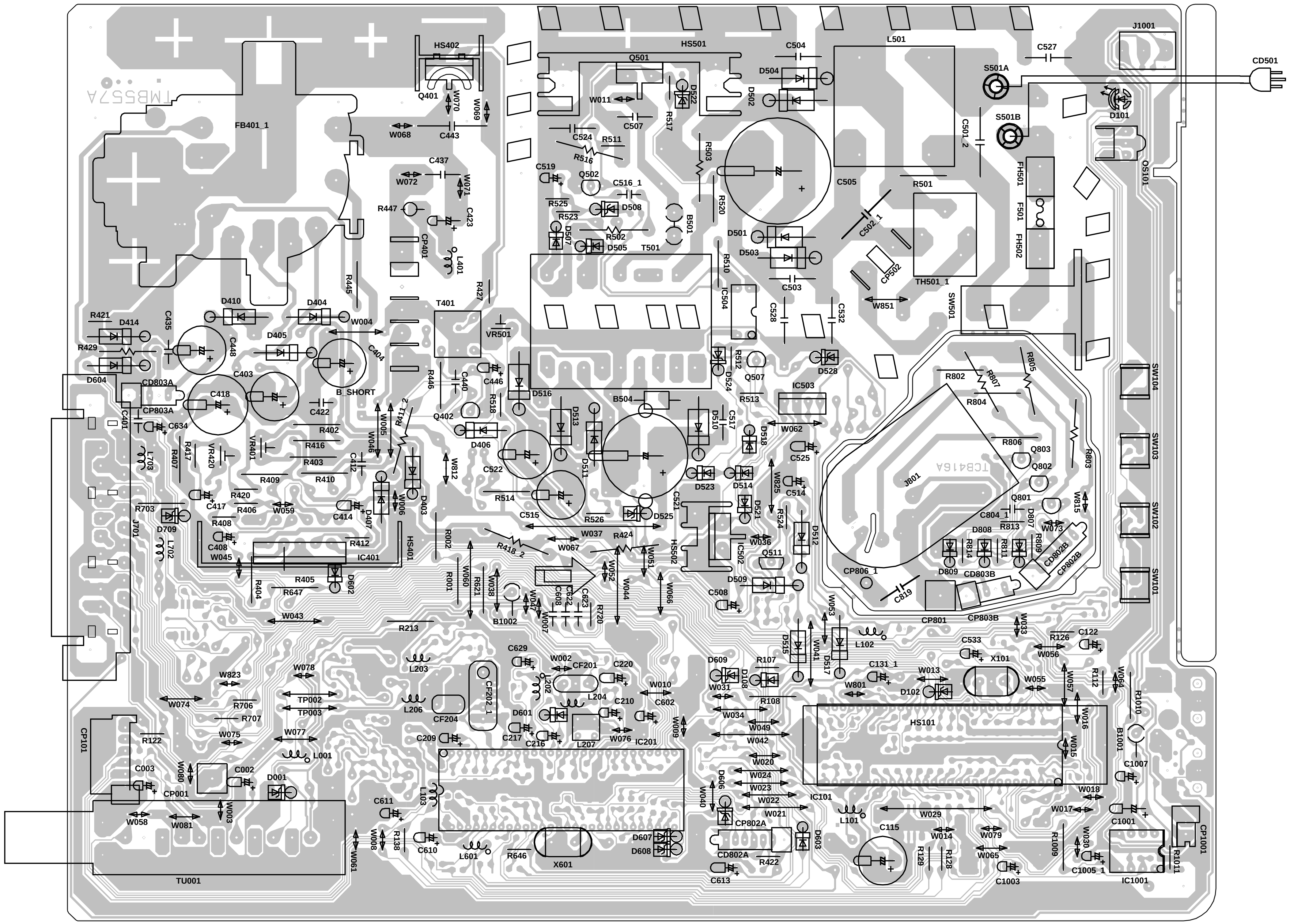
4. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)



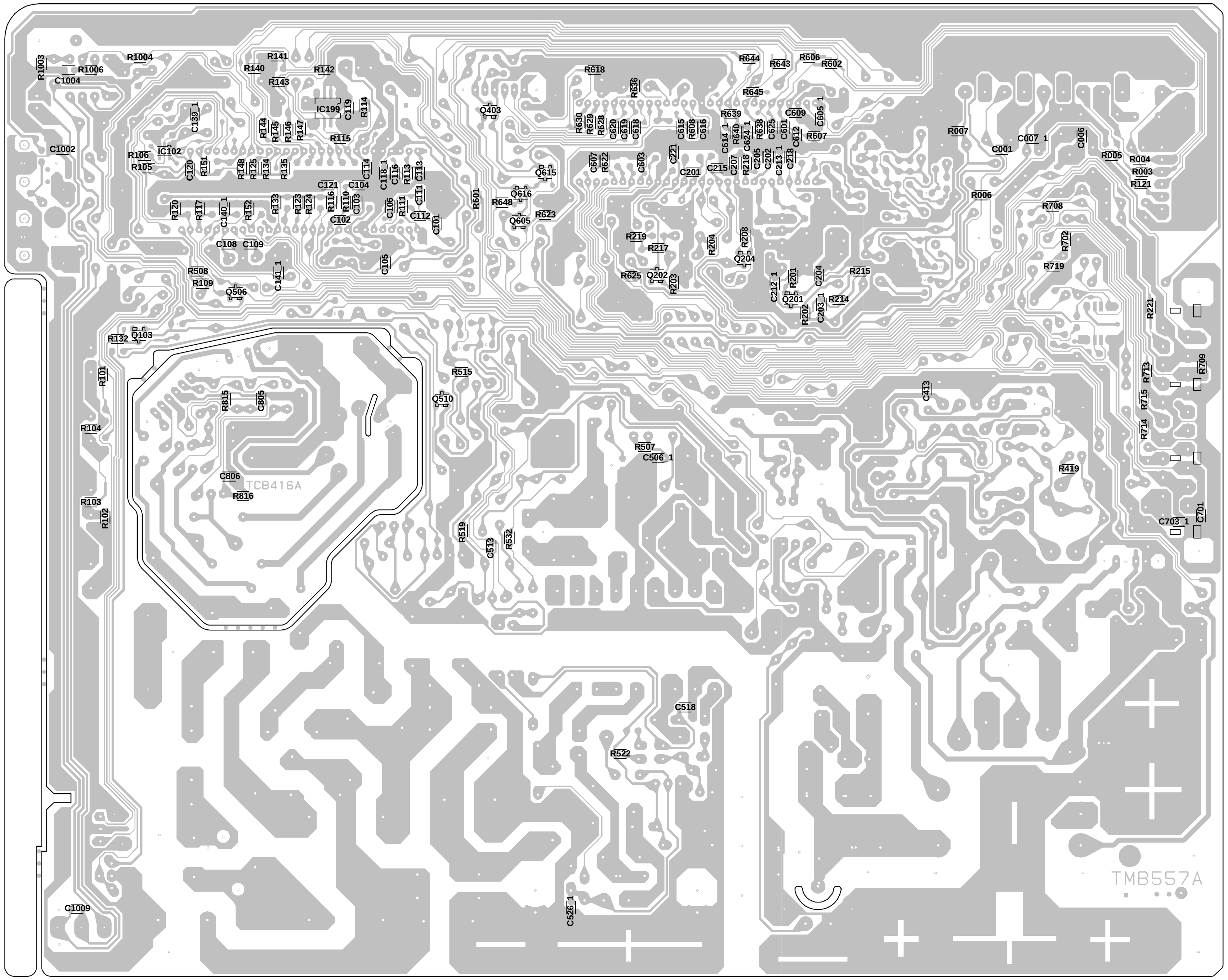
BLOCK DIAGRAM



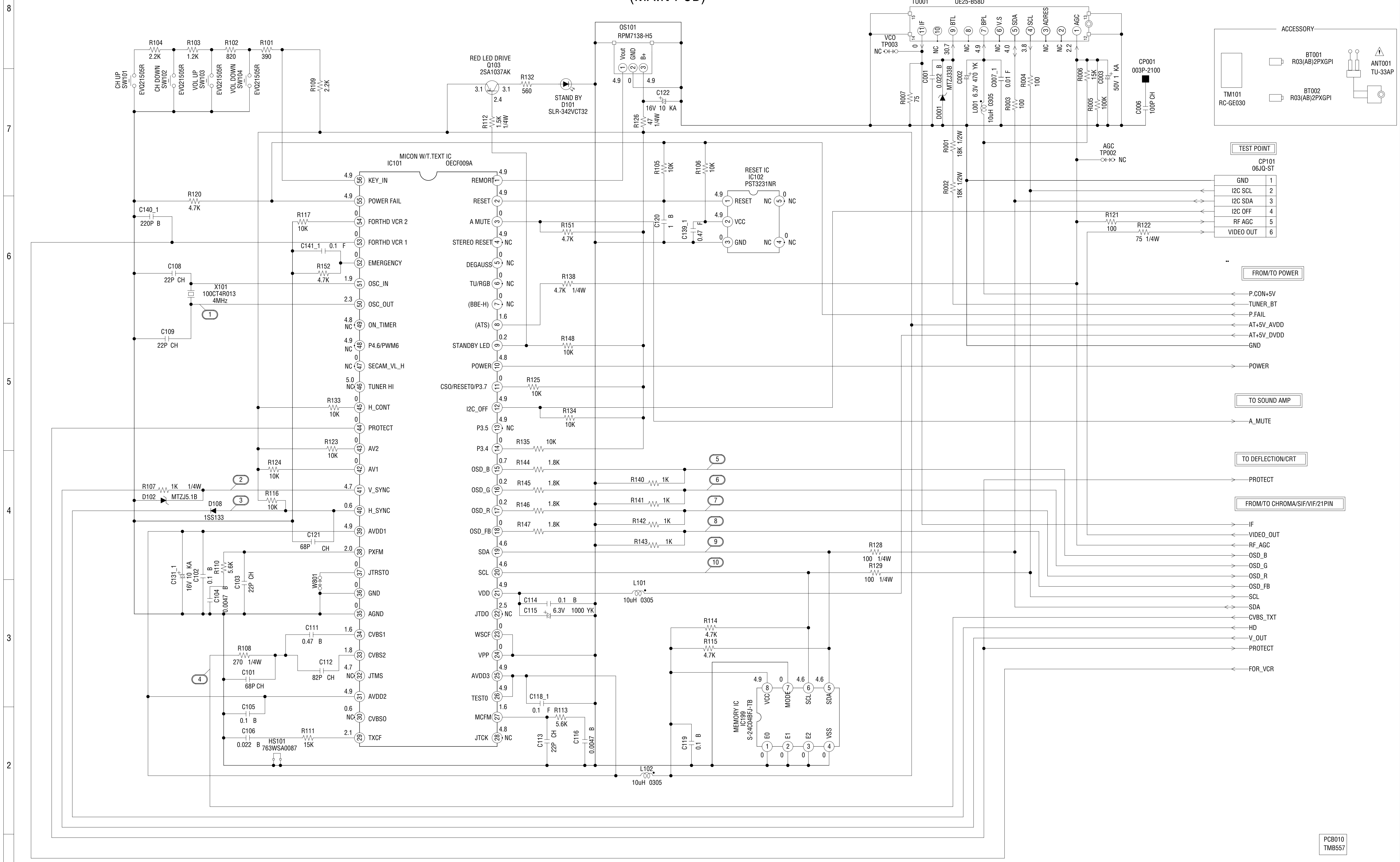
PRINTED CIRCUIT BOARDS
MAIN/CRT (INSERTED PARTS)
SOLDER SIDE



PRINTED CIRCUIT BOARDS
MAIN/CRT (CHIP MOUNTED PARTS)
SOLDER SIDE



MICON/TUNER SCHEMATIC DIAGRAM
(MAIN PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

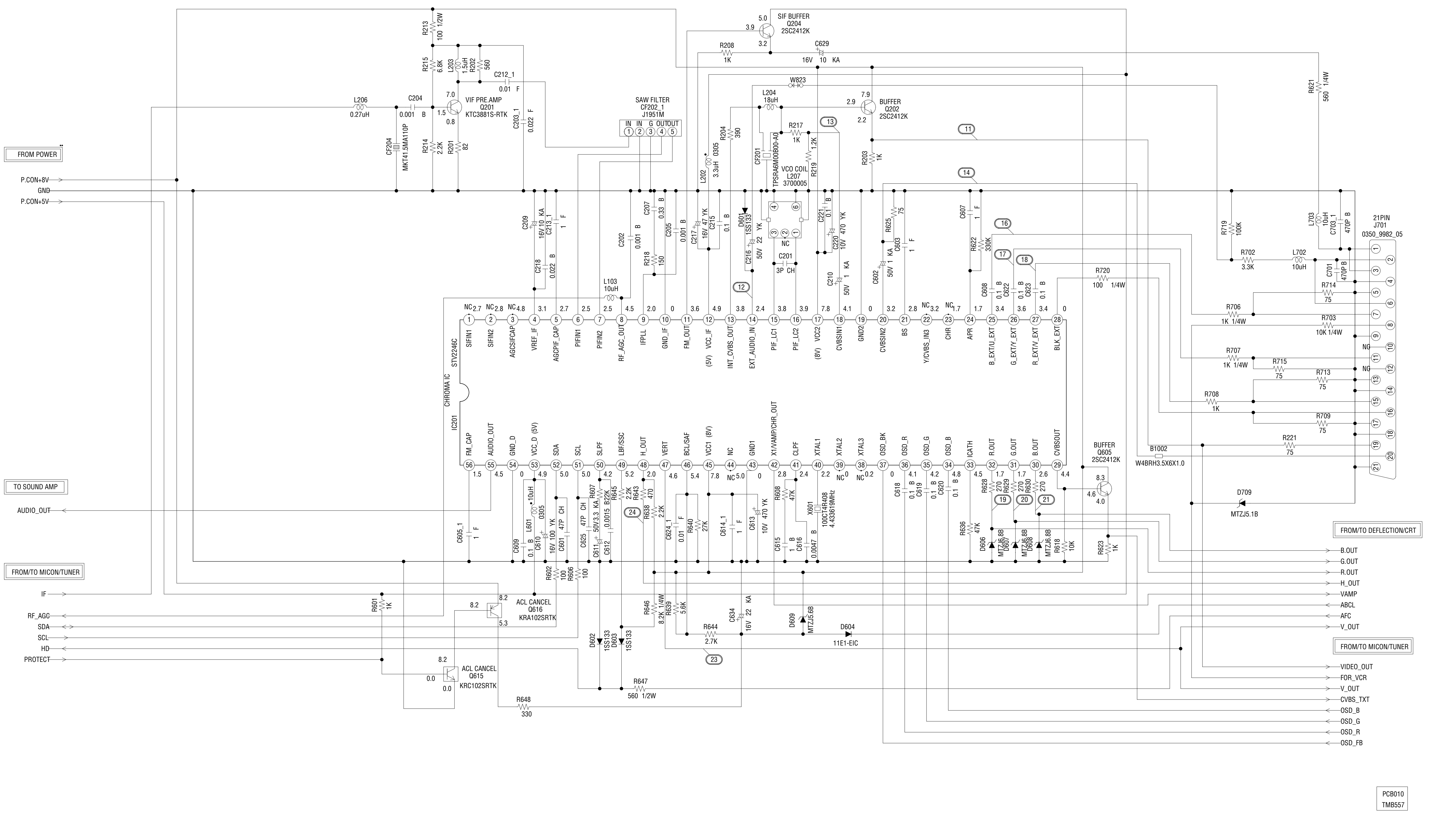
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

CHROMA/SIF/VIF/21PIN SCHEMATIC DIAGRAM

(MAIN PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

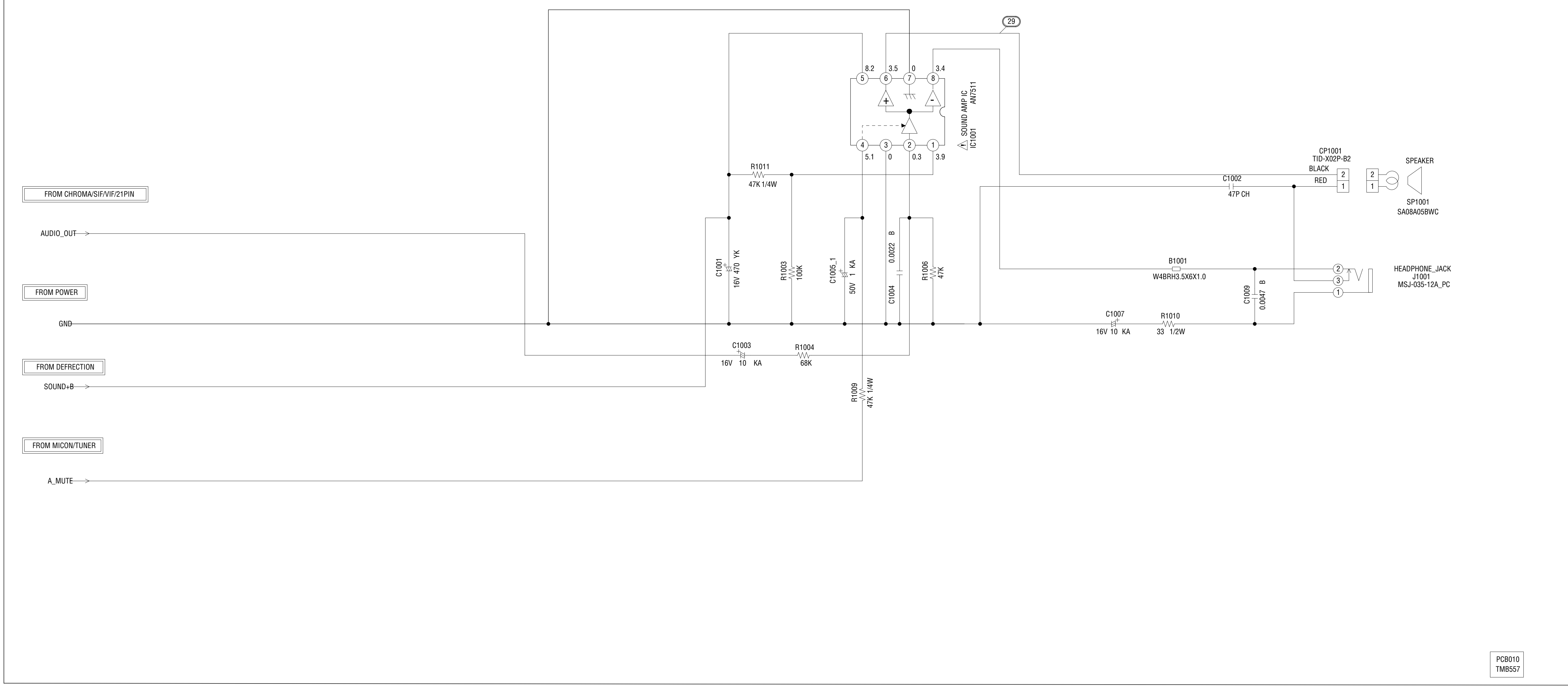
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: DIGITAL TRANSISTOR

CAUTION: DIGITAL TRANSISTOR

SOUND AMP/FRONT AV SCHEMATIC DIAGRAM

(MAIN PCB)



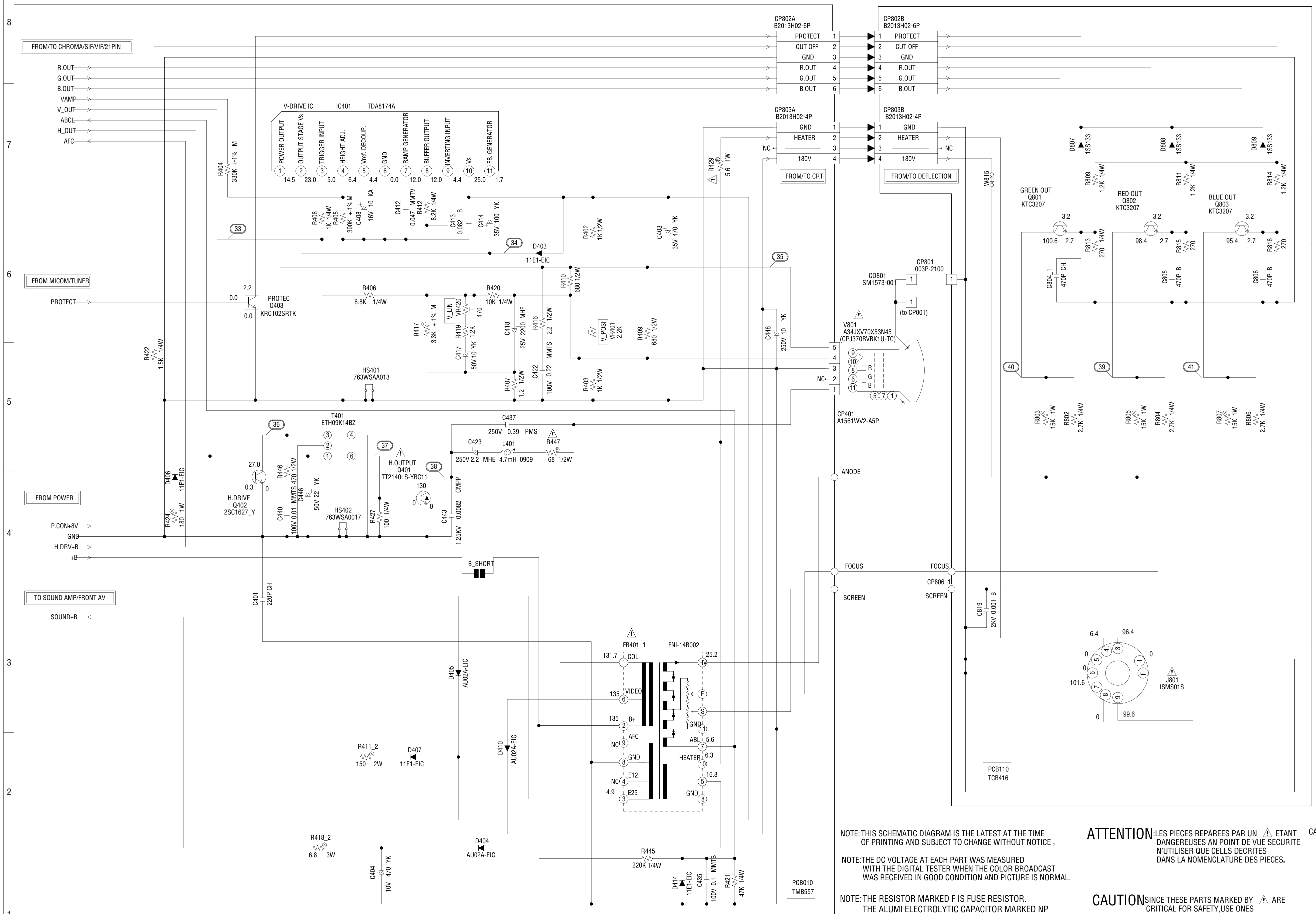
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

DEFLECTION/CRT SCHEMATIC DIAGRAM (MAIN PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

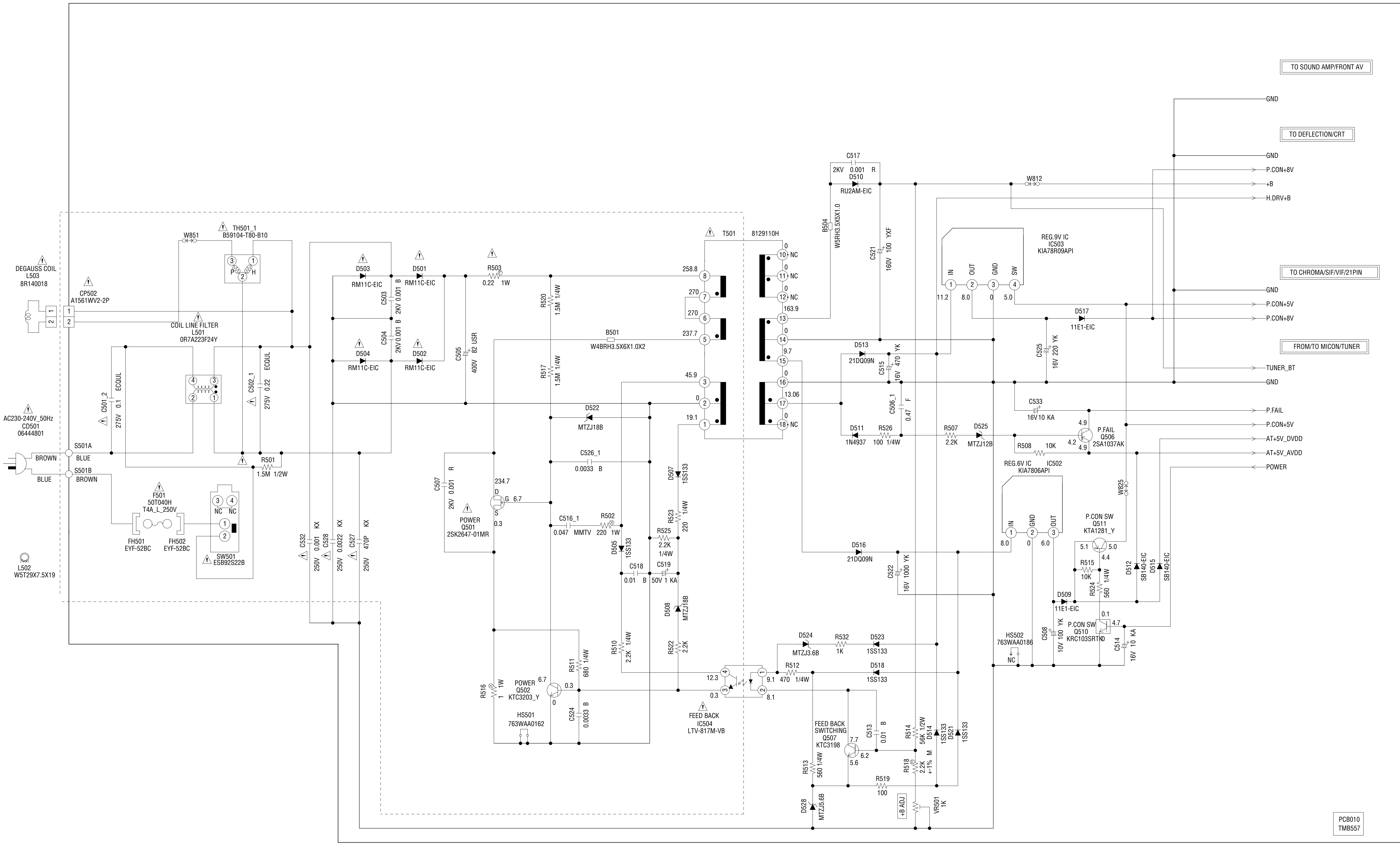
NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR. THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP IS NON POLAR ONE.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

CAUTION: DIGITAL TRANSISTOR

POWER SCHEMATIC DIAGRAM
(MAIN PCB)



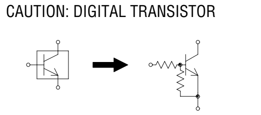
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY.

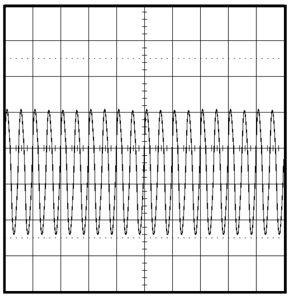
CAUTION: DIGITAL TRANSISTOR



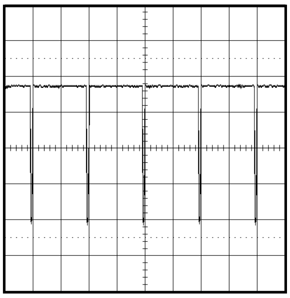
WAVEFORMS

MICON/TUNER

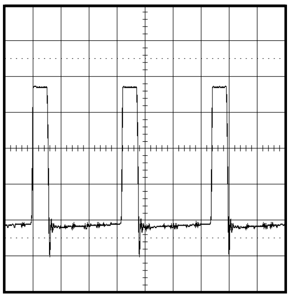
0.5µs
1.00V

① 

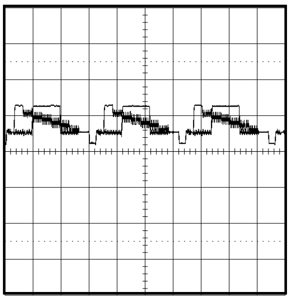
10ms
1.00V

② 

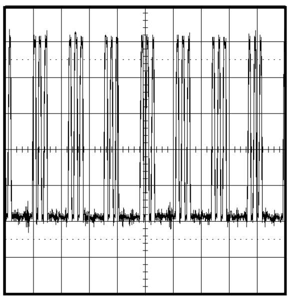
20µs
1.00V

③ 

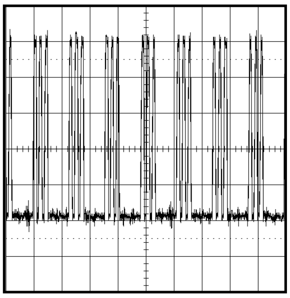
20µs
1.00V

④ 

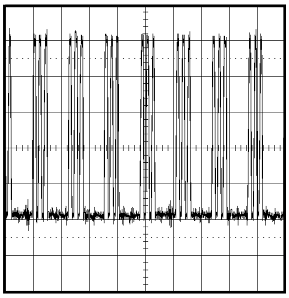
50µs
100mV

⑤ 

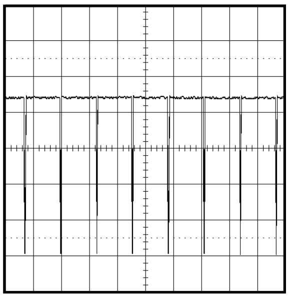
50µs
100mV

⑥ 

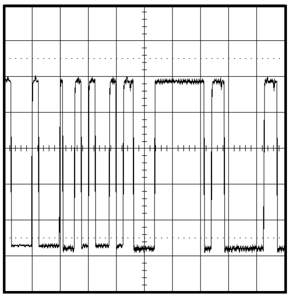
50µs
100mV

⑦ 

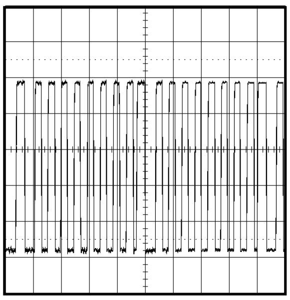
50µs
0.50V

⑧ 

0.2ms
1.00V

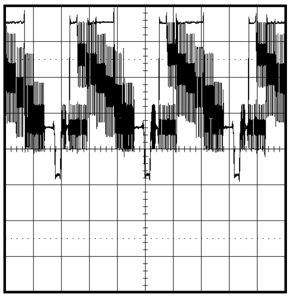
⑨ 

0.2ms
1.00V

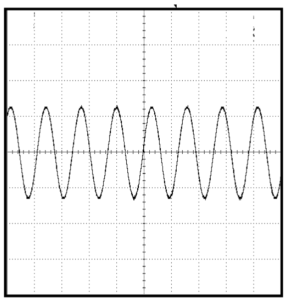
⑩ 

CHROMA/SIF/VIF/21PIN

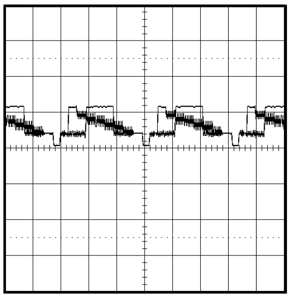
20µs
0.50V

⑪ 

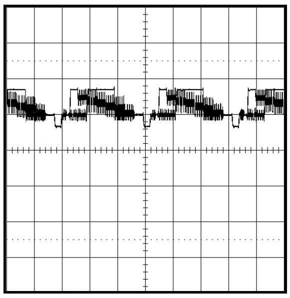
2ms
200mV

⑫ 

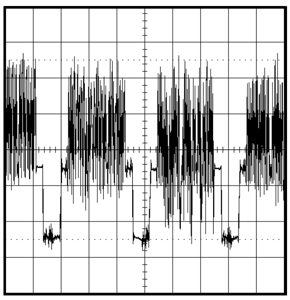
20µs
1.00V

⑬ 

20µs
1.00V

⑭ 

20µs
100mV

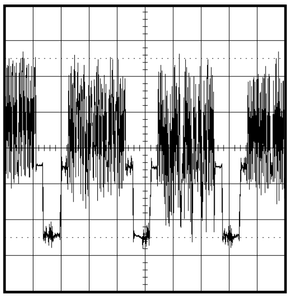
⑯ 

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

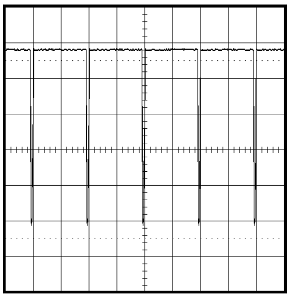
20µs
1.00V

(17)



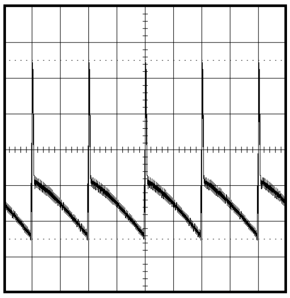
10ms
1.00V

(23)



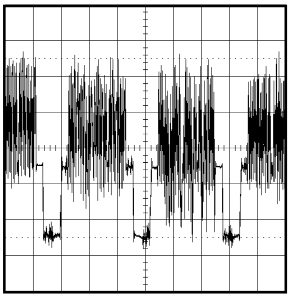
10ms
10.0V

(35)



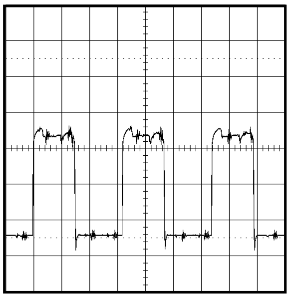
20µs
100mV

(18)



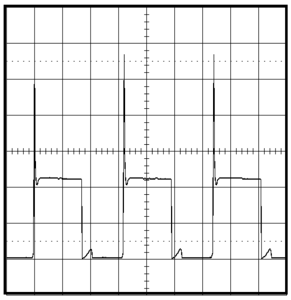
20µs
200mV

(24)



20µs
10.0V

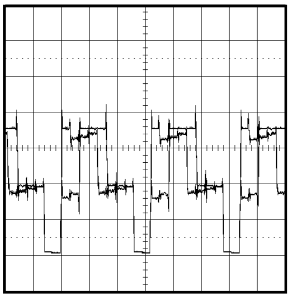
(36)



SOUND AMP/FRONT AV

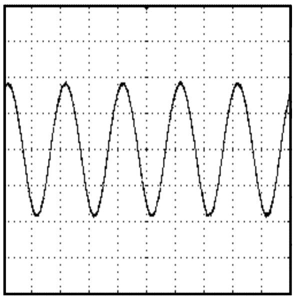
20µs
1.00V

(19)



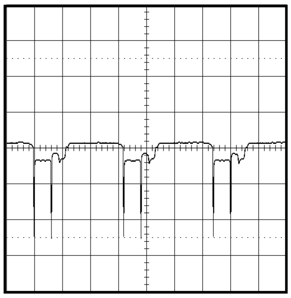
500us
500mV

(29)



20µs
5.0V

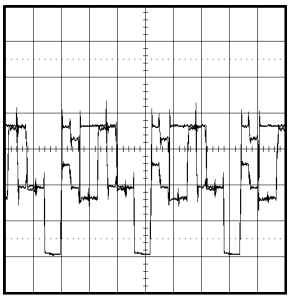
(37)



DEFLECTION/CRT

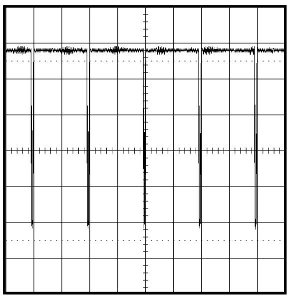
20µs
1.00V

(20)



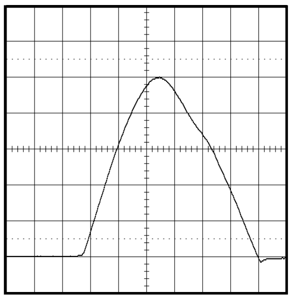
10ms
1.00V

(33)



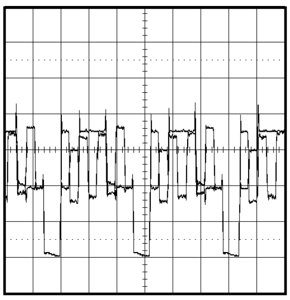
2µs
200V

(38)



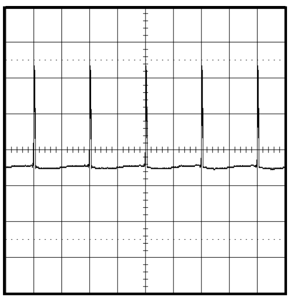
20µs
1.00V

(21)



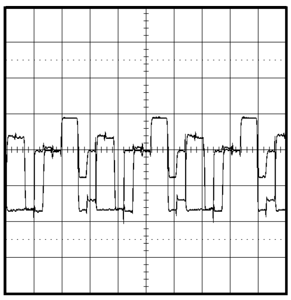
10ms
10.0V

(34)



20µs
50V

(39)

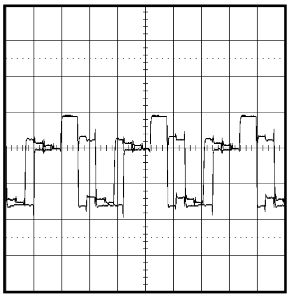


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

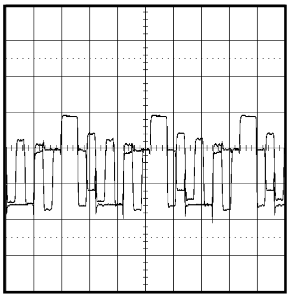
20µs
50V

(40)



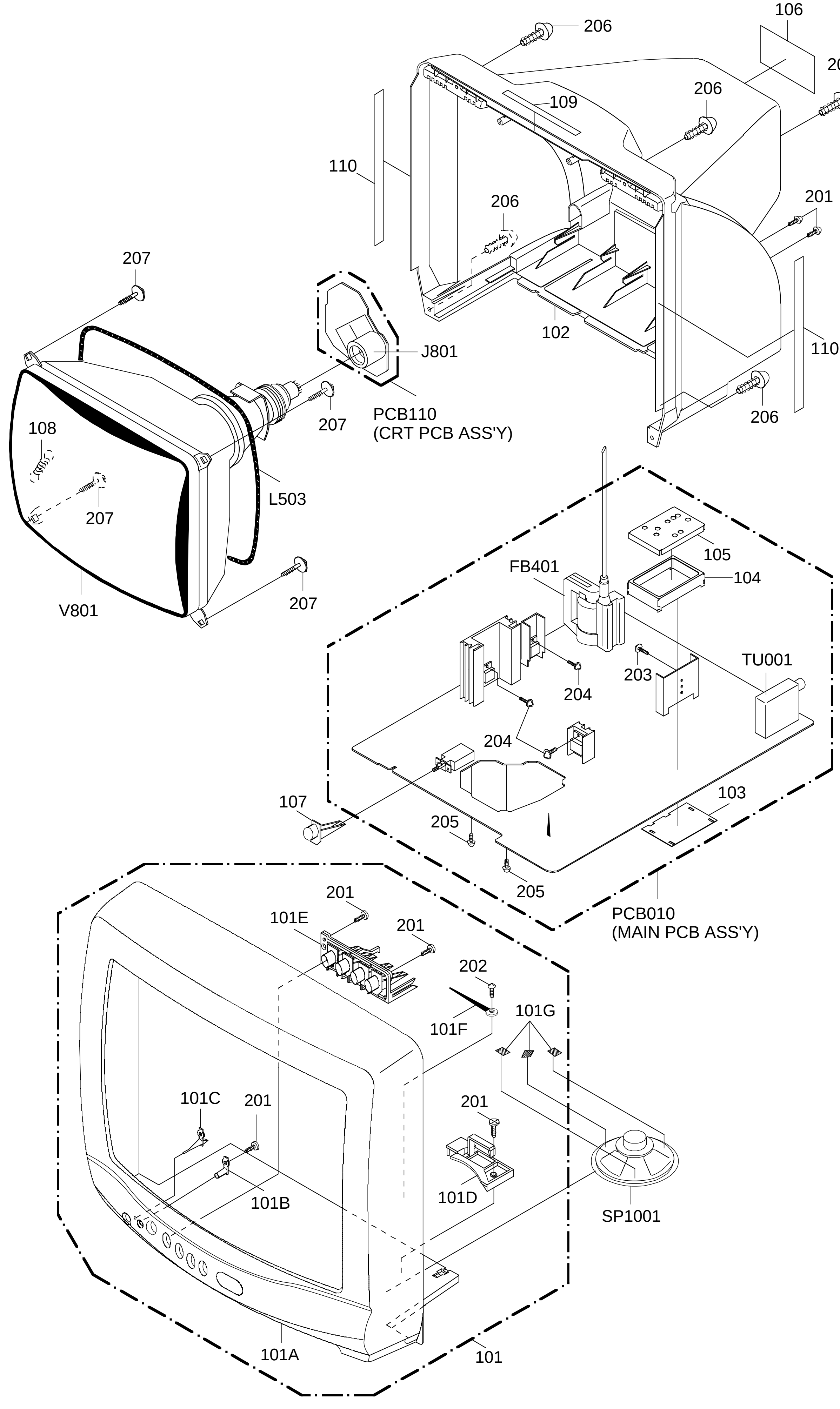
20µs
50V

(41)



NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

MECHANICAL EXPLODED VIEW



MECHANICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION		
101	A3M421I720	CABINET,FRONT ASSY		
101A	701WPJC340	CABINET,FRONT		
101B	713WPAA048	GUIDE,REMOCON		
101C	713WPAA111	GLASS LED		
101D	735WPA0396	SPEAKER,HOLDER		
101E	735WPBA808	BUTTON,FRAME		
101F	8995034000	CORD CLIP UL CO.		
101G	725000A063	SHEET,PC		
102	A3M421I740	CABINET,BACK ASS'Y		
103	752WSAA006	PLATE,SHIELD		
104	752WSAA008	SHIELD,CASE		
105	752WSAA013	SHIELD,LID		
106	722575A004	SHEET,RATING		
107	735WPBA809	BUTTON,POWER		
108	741WUA0019	SPRING,EARTH		
109	800WQ0A029	FELT,SHEET	10x150 T=0.5	
110	800WQ00032	SHEET	18x165xT0.5	
201	8110630A04	SCREW,TAP TITE(P)	BRAZIER	3x10
202	8110630604	SCREW,TAP TITE(P)	BRAZIER	3x6
203	8107630804	SCREW,TAP TITE(S)	BRAZIER	3x8
204	8109I30804	SCREW,TAP TITE(B)	WH7	3x8
205	8109630802	SCREW,TAP TITE(B)	BRAZIER	3x8
206	8117540A64	SCREW,TAPPING(B0)	TRUSS	4x16
207	8121J50B54	SCREW,TAP TITE(P)	GW20	5x28
---	792UHAA042	PACKAGE,TOP		
---	792UHAA043	PACKAGE,BOTTOM		
---	793UCDB170	GIFT BOX		
---	J3M42101A	INSTRUCTION BOOK		
---	J3M42107A	QUICK SET-UP SHEET		
---	JB5XD200	POLYBAG,INSTRUCTION(RED CAUTION)		
---	A3M421I975	INSTRUCTION BOOK KIT		

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
		RESISTORS	
⚠ R411	R3X28A151J	R.METAL OXIDE	150 OHM 2W
⚠ R418	R3X28B6R8J	R,METAL OXIDE	6.8 OHM 3W
⚠ R424	R3X181181J	R,METAL OXIDE	180 OHM 1W
⚠ R429	R635815R6J	R,FUSE	5.6 OHM 1W
⚠ R447	R635U2680J	R,FUSE	68 OHM 1/2W
⚠ R501	R002T2155J	RC	1.5M OHM 1/2W
⚠ R502	R3X181221J	R,METAL OXIDE	220 OHM 1W
⚠ R503	R63581R22J	R,FUSE	0.22 OHM 1W
⚠ R516	R3X181010J	R,METAL OXIDE	1 OHM 1W
⚠ R517	R002T4155J	RC	1.5M OHM 1/4W
⚠ R803	R3X181153J	R,METAL OXIDE	15K OHM 1W
⚠ R805	R3X181153J	R,METAL OXIDE	15K OHM 1W
⚠ R807	R3X181153J	R,METAL OXIDE	15K OHM 1W
		CAPACITORS	
C418	E5EZF3222M	CE	2200 UF 25V
C437	P4J7F3394J	CMPP	0.39 UF 250V PMS
C443	P4N8FJ822H	CMPP	0.0082UF 1.25KV
⚠ C501	P2122B104M	CMP	0.1 UF 275V ECQUL
⚠ C502	P2122B224M	CMP	0.22 UF 275V ECQUL
C503	C0JBB0713K	CC	0.001 UF 2KV B
C504	C0JBB0713K	CC	0.001 UF 2KV B
⚠ C505	E52DHH820M	CE	82 UF 400V
⚠ C507	C03L0R713K	CC	0.001 UF 2KV R
C517	C03L0R713K	CC	0.001 UF 2KV R
C521	E62NFB101M	CE	100 UF 160V
⚠ C527	CD39B0MQ2K	CC	470 PF 250V
⚠ C528	CD39E0MH3M	CC	0.0022UF 250V
⚠ C532	CD39E0M13M	CC	0.001 UF 250V
C819	C0JBB0713K	CC	0.001 UF 2KV B
		DIODES	
D001	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D101	0021721150	LED	SLR-342VCT32
D102	D97U05R11B	DIODE,ZENER	MTZJ5.1B T-77
D108	D1VT001330	DIODE,SILICON	1SS133T-77
D403	D2WT011E10	DIODE SILICON	11E1-EIC
D404	D2WTAU02A0	DIODE SILICON	AU02A-EIC
D405	D2WTAU02A0	DIODE SILICON	AU02A-EIC
D406	D2WT011E10	DIODE SILICON	11E1-EIC
D407	D2WT011E10	DIODE SILICON	11E1-EIC
D410	D2WTAU02A0	DIODE SILICON	AU02A-EIC
D414	D2WT011E10	DIODE SILICON	11E1-EIC
⚠ D501	D2WTRM11C0	DIODE SILICON	RM11C-EIC
⚠ D502	D2WTRM11C0	DIODE SILICON	RM11C-EIC
⚠ D503	D2WTRM11C0	DIODE SILICON	RM11C-EIC
⚠ D504	D2WTRM11C0	DIODE SILICON	RM11C-EIC
D505	D1VT001330	DIODE,SILICON	1SS133T-77
D507	D1VT001330	DIODE,SILICON	1SS133T-77
D508	D97U01801B	DIODE,ZENER	MTZJ18B T-77
D509	D2WT011E10	DIODE SILICON	11E1-EIC
D510	D2WXRU2AM0	DIODE SILICON	RU2AM-EIC
D511	D2WXN49370	DIODE SILICON	1N4937
D512	D2WXSB1400	DIODE SCHOTTKY	SB140-EIC
D513	D28T21DQN9	DIODE SCHOTTKY	21DQ09N-TA2B1
D514	D1VT001330	DIODE,SILICON	1SS133T-77
⚠ D515	D2WXSB1400	DIODE SCHOTTKY	SB140-EIC
D516	D28T21DQN9	DIODE SCHOTTKY	21DQ09N-TA2B1
D517	D2WT011E10	DIODE SILICON	11E1-EIC
D518	D1VT001330	DIODE,SILICON	1SS133T-77
D521	D1VT001330	DIODE,SILICON	1SS133T-77
D522	D97U01801B	DIODE,ZENER	MTZJ18B T-77
D523	D1VT001330	DIODE,SILICON	1SS133T-77
D524	D97U03R61B	DIODE,ZENER	MTZJ3.6B T-77
D525	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D528	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D601	D1VT001330	DIODE,SILICON	1SS133T-77
D602	D1VT001330	DIODE,SILICON	1SS133T-77
D603	D1VT001330	DIODE,SILICON	1SS133T-77
D604	D2WT011E10	DIODE SILICON	11E1-EIC
D606	D97U06R81B	DIODE,ZENER	MTZJ6.8B T-77
D607	D97U06R81B	DIODE,ZENER	MTZJ6.8B T-77
D608	D97U06R81B	DIODE,ZENER	MTZJ6.8B T-77
D609	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D709	D97U05R11B	DIODE,ZENER	MTZJ5.1B T-77
D807	D1VT001330	DIODE,SILICON	1SS133T-77
D808	D1VT001330	DIODE,SILICON	1SS133T-77
D809	D1VT001330	DIODE,SILICON	1SS133T-77

REF. NO.	PART NO.	DESCRIPTION	
		ICS	
IC101	I5PD0F009A	IC	OECF009A
IC102	I9UF032310	IC	PST3231NR
IC199	A3M401M015	IC	S-24C04BFJ-TB
IC201	I0WDE246C0	IC	STV2246C
IC401	I0WTD81740	IC	TDA8174A
IC502	I1KA97806A	IC	KIA7806API
IC503	I1KA98R09A	IC	KIA78R09API
⚠ IC504	0002E00610	PHOTO COUPLER	LTV-817M-VB
IC1001	I01DP75110	IC	AN7511
		TRANSISTORS	
Q103	T6YJ1037K0	TRANSISTOR,SILICON	2SA1037AKT146R,S
Q201	T8AA03881S	TRANSISTOR SILICON	KTC3881S-RTK
Q202	T8YJ2412K0	TRANSISTOR SILICON	2SC2412KT146 R,S
Q204	T8YJ2412K0	TRANSISTOR SILICON	2SC2412KT146 R,S
⚠ Q401	TD3Q021400	TRANSISTOR SILICON	TT2140LS-YBC11
Q402	TC5T01627Y	TRANSISTOR SILICON	2SC1627_Y(TPE2)
Q403	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
⚠ Q501	T410K26470	FET	2SK2647-01MR
Q502	TCAT032034	TRANSISTOR, SILICON	KTC3203_Y-AT
Q506	T6YJ1037K0	TRANSISTOR,SILICON	2SA1037AKT146R,S
Q507	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q510	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q511	TAAT01281Y	TRANSISTOR SILICON	KTA1281_Y
Q605	T8YJ2412K0	TRANSISTOR SILICON	2SC2412KT146 R,S
Q615	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q616	TPAAB05001	COMPOUND TRANSISTOR	KRA102SRTK
Q801	TCAT032070	TRANSISTOR SILICON	KTC3207-AT
Q802	TCAT032070	TRANSISTOR SILICON	KTC3207-AT
Q803	TCAT032070	TRANSISTOR SILICON	KTC3207-AT
		COILS &TRANSFORMERS	
L001	02167F100J	COIL	10 UH
L101	02167F100J	COIL	10 UH
L102	02167F100J	COIL	10 UH
L103	0216A6100K	COIL	10 UH
L202	02167F3R3J	COIL	3.3 UH
L203	0216A61R5K	COIL	1.5 UH
L204	0216A6180K	COIL	18 UH
L206	0216A6R27M	COIL	0.27 UH
L207	033700005R	COIL,VIDEO IFT	3700005
L401	021679472K	COIL	4.7 MH
⚠ L501	029T000094	COIL,LINE FILTER	0R7A223F24Y
L502	02AHB9A972	CORE,FERRITE	W5T29X7.5X19
⚠ L503	028R140018	COIL,DEGAUSS	8R140018
L601	02167F100J	COIL	10 UH
L702	0216A6100K	COIL	10 UH
L703	0216A6100K	COIL	10 UH
T401	045009003J	TRANS,HORIZONTAL DRIVE	ETH09K14BZ
⚠ T501	048129110H	TRANSFORMER,SWITCHING	8129110H
		JACKS	
J701	063G100042	SOCKET,21PIN	0350_9982_05
J801	066F120018	SOCKET,CATHODE RAY TUBE	ISMS01S
J1001	060J121014	JACK,RCA,3.5	MSJ-035-12A_PC
		SWITCHES	
SW101	0504101T34	SWITCH,TACT	EVQ21505R
SW102	0504101T34	SWITCH,TACT	EVQ21505R
SW103	0504101T34	SWITCH,TACT	EVQ21505R
SW104	0504101T34	SWITCH,TACT	EVQ21505R
⚠ SW501	0530105019	SWITCH	ESB92S22B
		VARIABLE RESISTORS	
VR401	V1163H3BTC	VOLUME,SEMI FIXED	EVNCYAA03BE3
VR420	V1163Q2BTC	VOLUME,SEMI FIXED	EVNCYAA03BQ2
VR501	V116313BTC	VOLUME,SEMI FIXED	EVNCYAA03B13
		P.C.BOARD ASSEMBLIES	
PCB010	A3M421I010K	PCB ASS'Y	TMB557A
PCB110	A3M420I110K	PCB ASS'Y	TCB416A
		MISCELLANEOUS	
ANT001	125C500017	ANTENNA,LOOP	TU-33AP
B501	024HT03563	CORE,BEADS	W4BRH3.5X6X1.0X2
B504	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B1001	024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
B1002	024HT03564	CORE,BEADS	W4BRH3.5X6X1.0
BT001	1412004013	BATTERY,MANGAN	R03(AB)2PXGPI
BT002	1412004013	BATTERY,MANGAN	R03(AB)2PXGPI
⚠ CD501	1206444801	CORD AC BUSH	6444801
CD801	1278140030	BRAIDED WIRE	SM1573-001
CD802	WDL6028038	FLAT CABLE	AWG26 6C BLACK 280MM
CD803	WBL6026038	FLAT CABLE	AWG26 4C BLACK 260MM

ELECTRICAL REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	
MISCELLANEOUS			
CF201	1012T6R014	FILTER,CERAMIC TRAP	TPSRA6M00B00-A0
CF202	102E239R5B	FILTER SAW	J1951M
CF204	1012T04101	FILTER,CERAMIC TRAP	MKT41.5MA110P
CP001	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP101	069X160379	CONNECTOR PCB SIDE	06JQ-ST
CP401	069S450089	CONNECTOR PCB SIDE	A1561WV2-A5P
CP502	069S420110	CONNECTOR PCB SIDE	A1561WV2-2P
CP801	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP1001	069W120019	CONNECTOR PCB SIDE	TID-X02P-B2
CP802A	067U006049	WIRE HOLDER	B2013H02-6P
CP802B	067U006049	WIRE HOLDER	B2013H02-6P
CP803A	067U004029	WIRE HOLDER	B2013H02-4P
CP803B	067U004029	WIRE HOLDER	B2013H02-4P
EL002	124120301A	EYE LET	XRY20X30BD
⚠ F501	080NT04004	FUSE	50T040H
⚠ FB401	043214039F	TRANSFORMER,FLYBACK	FNI-14B002
FH501	06710T0006	HOLDER,FUSE	EYF-52BC
FH502	06710T0006	HOLDER,FUSE	EYF-52BC
OS101	0773071001	REMOTE RECEIVER	RPM7138-H5
SP1001	070C132019	SPEAKER	SA08A05BWC
⚠ TH501	D8E080B100	DEGAUSS ELEMENT	B59104-T80-B10
TM101	076N0GE030	TRANSMITTER	RC-GE030
TU001	0144R07025	TUNER,UHF	UE25-B58D
⚠ V801	098Y1404B9	CRT W/DY	A34JXV70X53N45
X101	100CT4R013	CRYSTAL	HC-49/U-S
X601	100CT4R408	CRYSTAL	HC-49/U

RESISTOR

RC.................. CARBON RESISTOR

CAPACITORS

CC.................. CERAMIC CAPACITOR
CE.................. ALUMI ELECTROLYTIC CAPACITOR
CP.................. POLYESTER CAPACITOR
CPP................. POLYPROPYLENE CAPACITOR
CPL................. PLASTIC CAPACITOR
CMP.................. METAL POLYESTER CAPACITOR
CMPL............... METAL PLASTIC CAPACITOR
CMPP............... METAL POLYPROPYLENE CAPACITOR

SPEC.NO.	M3M4-21I
O/R NO.	U353551